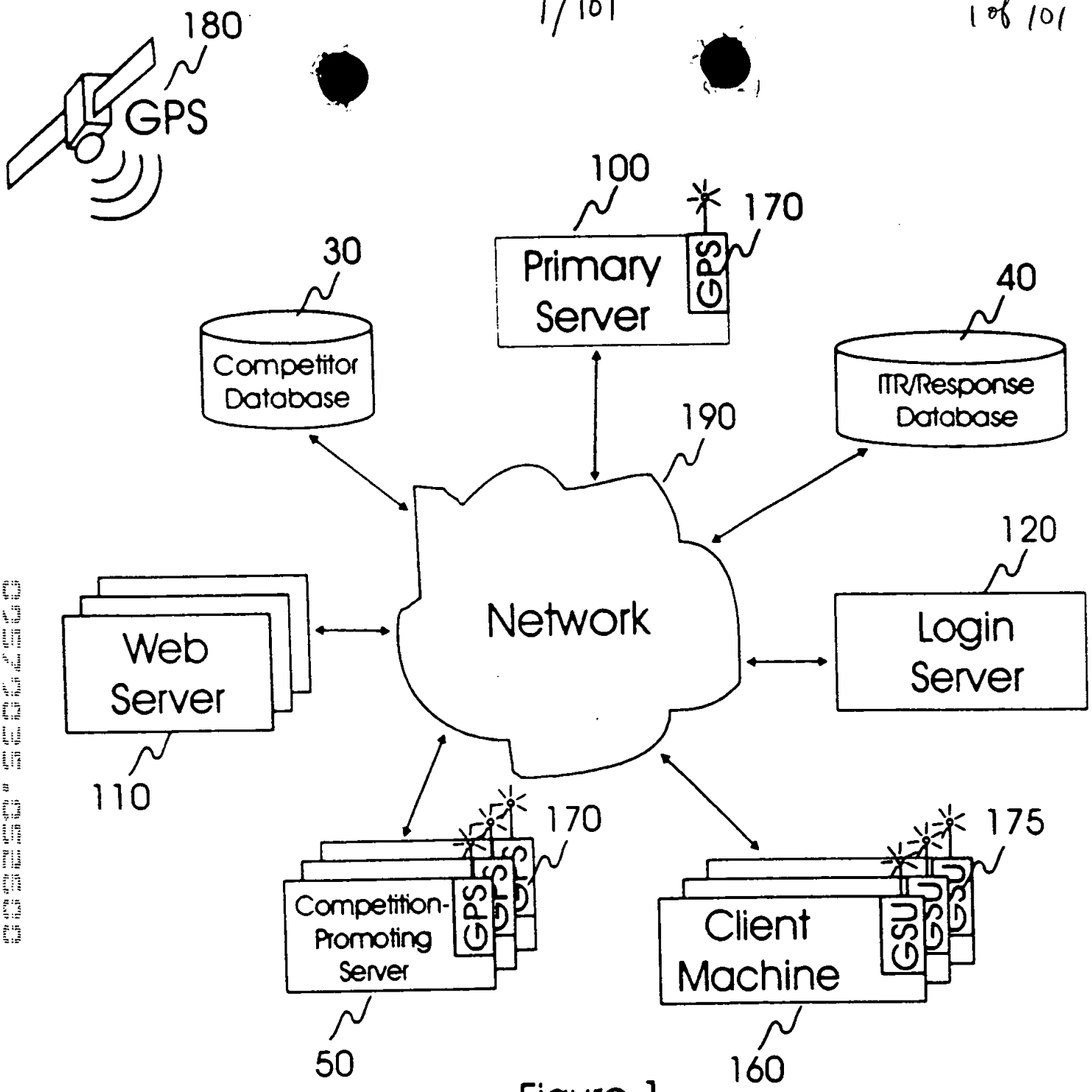
180
GPS
100
170
Primary Server
GPS
30
Competitor Database
40
ITR/Response Database
190
Network
120
Login Server
Web Server
110
170
Competition-Promoting Server
GPS
50
175
Client Machine
GSU
160

Figure 1

2b 101

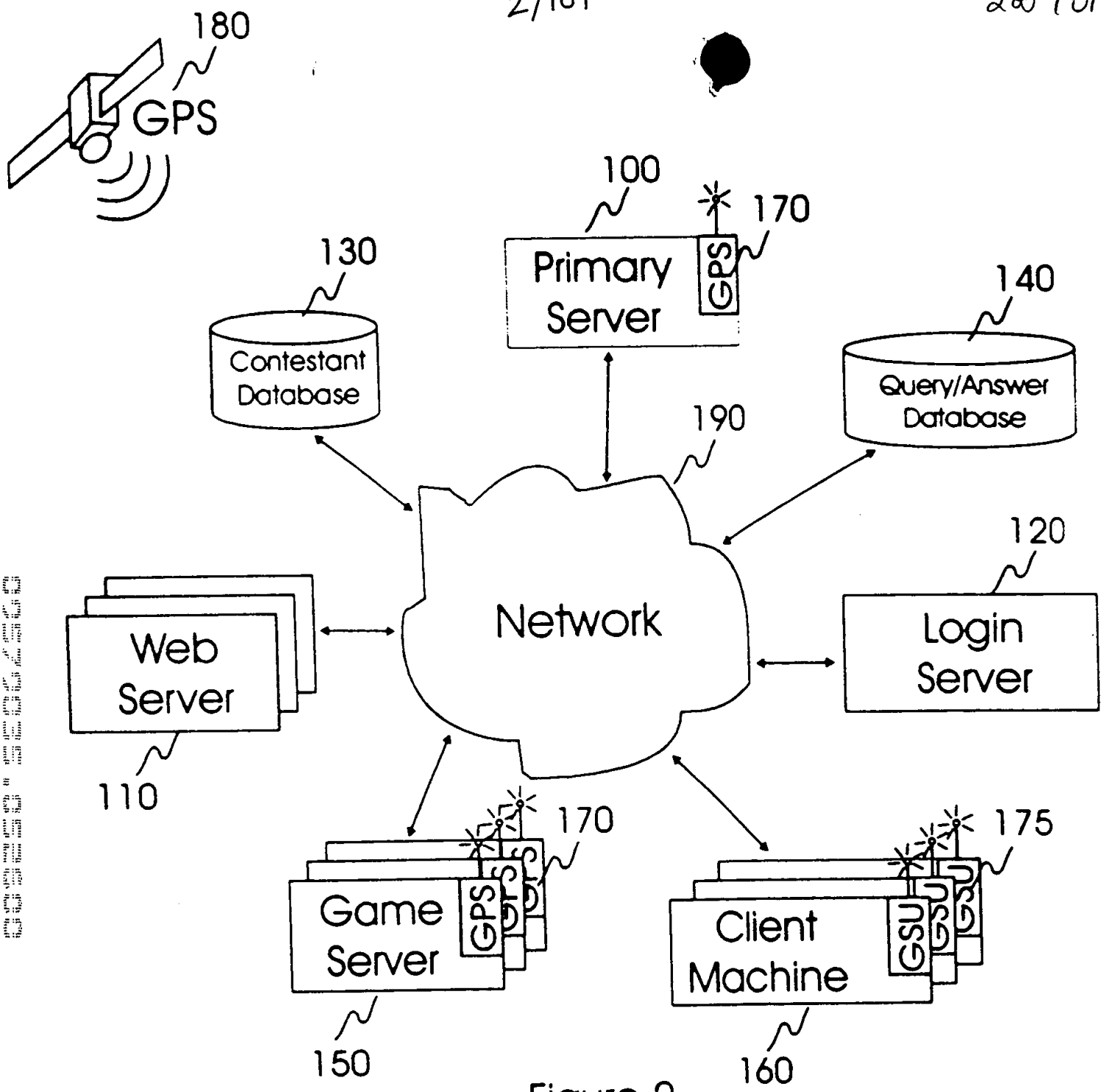

Figure 2

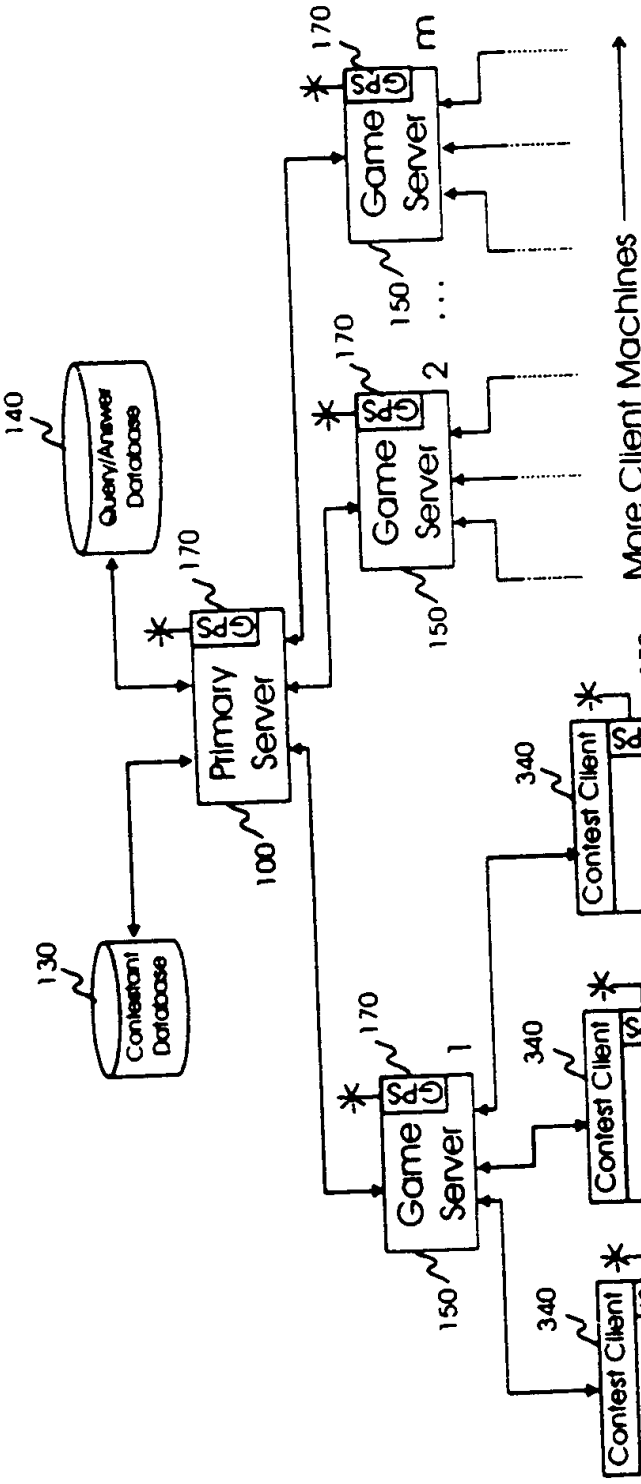
Contestant Database
130
Query/Answer Database
140
Primary Server
100
170
Game Server
150
1
2
m
Contest Client
340
Client Machine
160
n
More Client Machines

Figure 2A

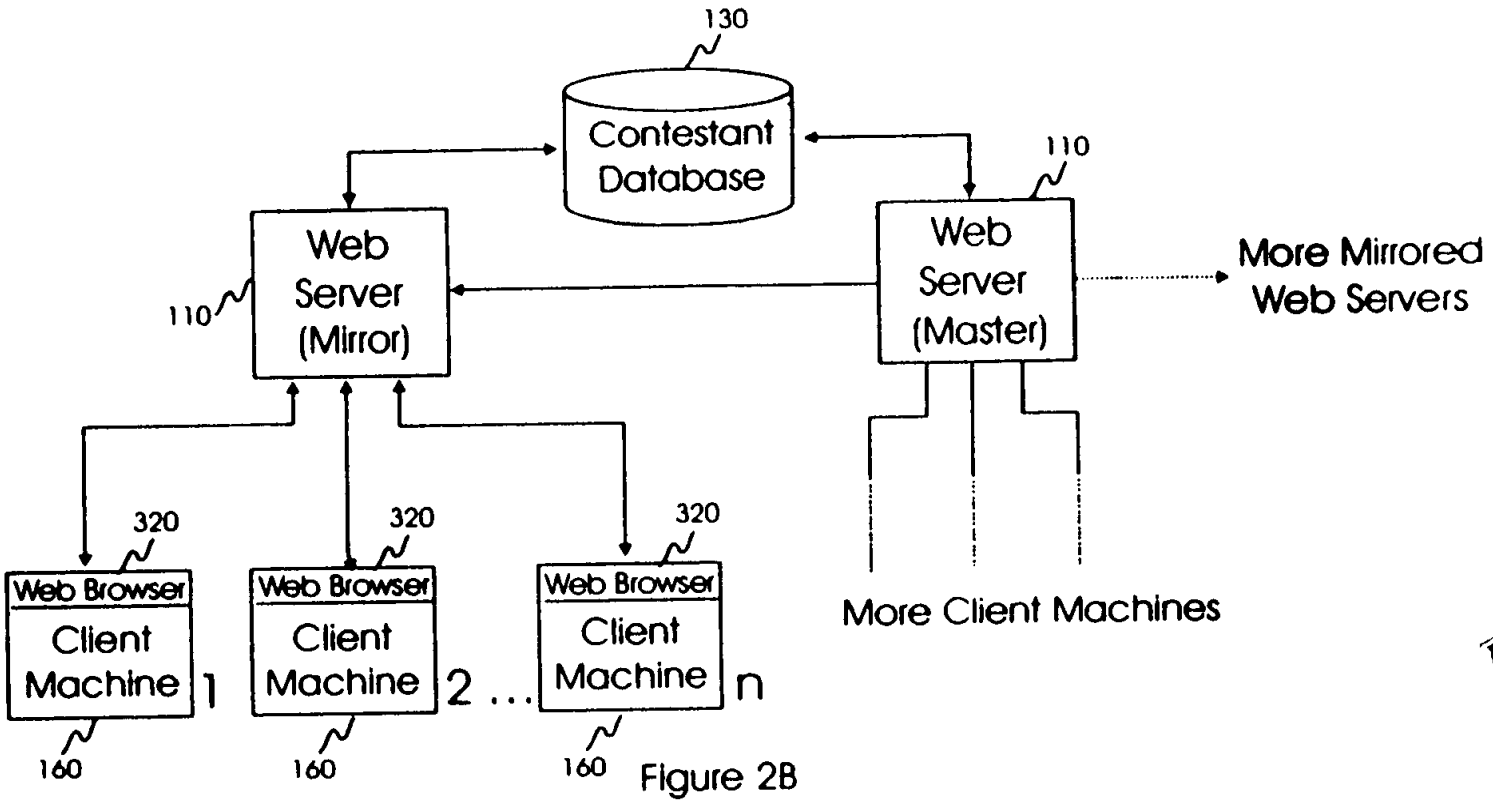
130
Contestant Database
110
Web Server (Mirror)
110
Web Server (Master)
More Mirrored Web Servers
320
320
320
Web Browser
Client Machine
1
Web Browser
Client Machine
2 ...
Web Browser
Client Machine
n
160
160
160
More Client Machines

Figure 2B

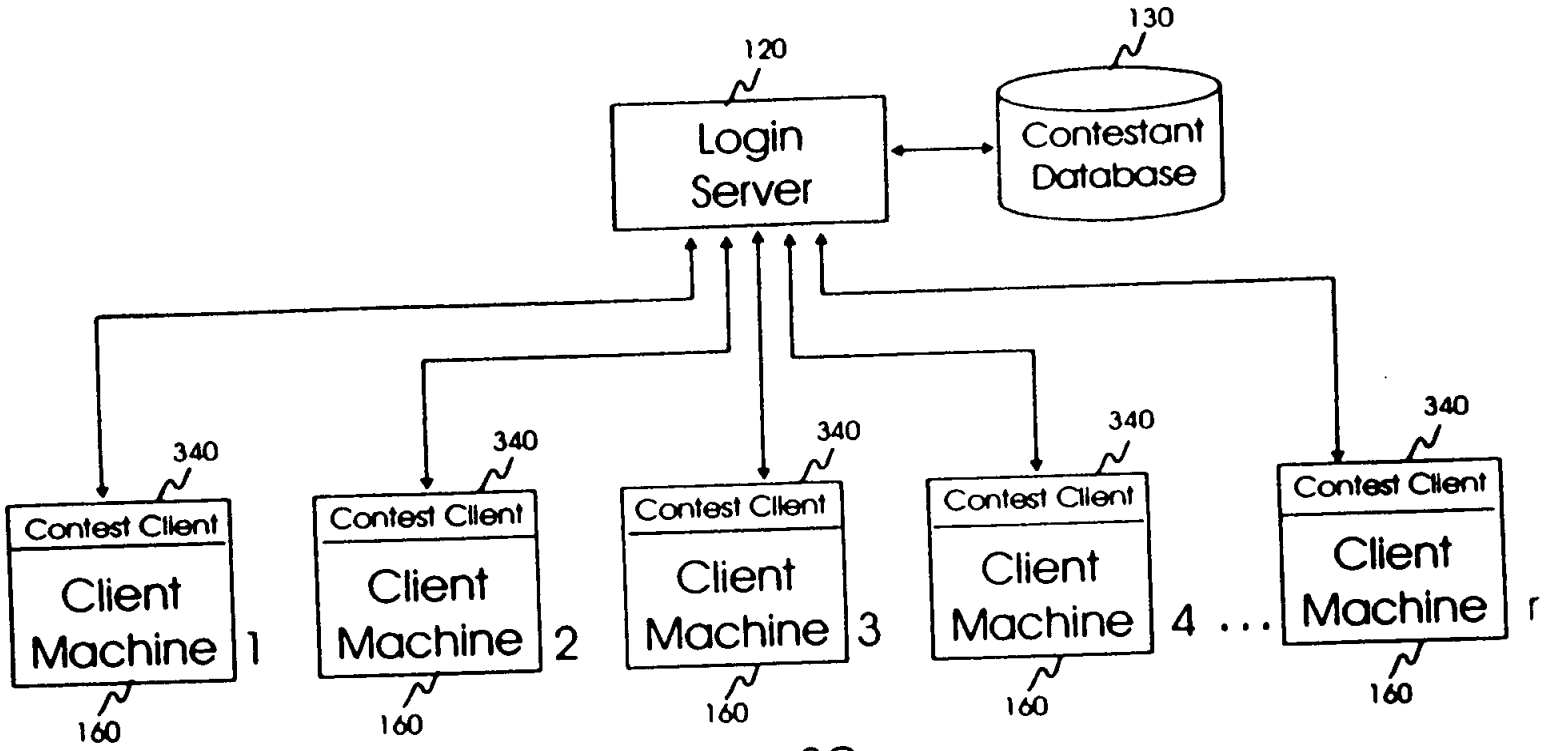
120
Login Server
130
Contestant Database
340
Contest Client
Client Machine 1
160
340
Contest Client
Client Machine 2
160
340
Contest Client
Client Machine 3
160
340
Contest Client
Client Machine 4
160
340
Contest Client
Client Machine r
160

Figure 2C

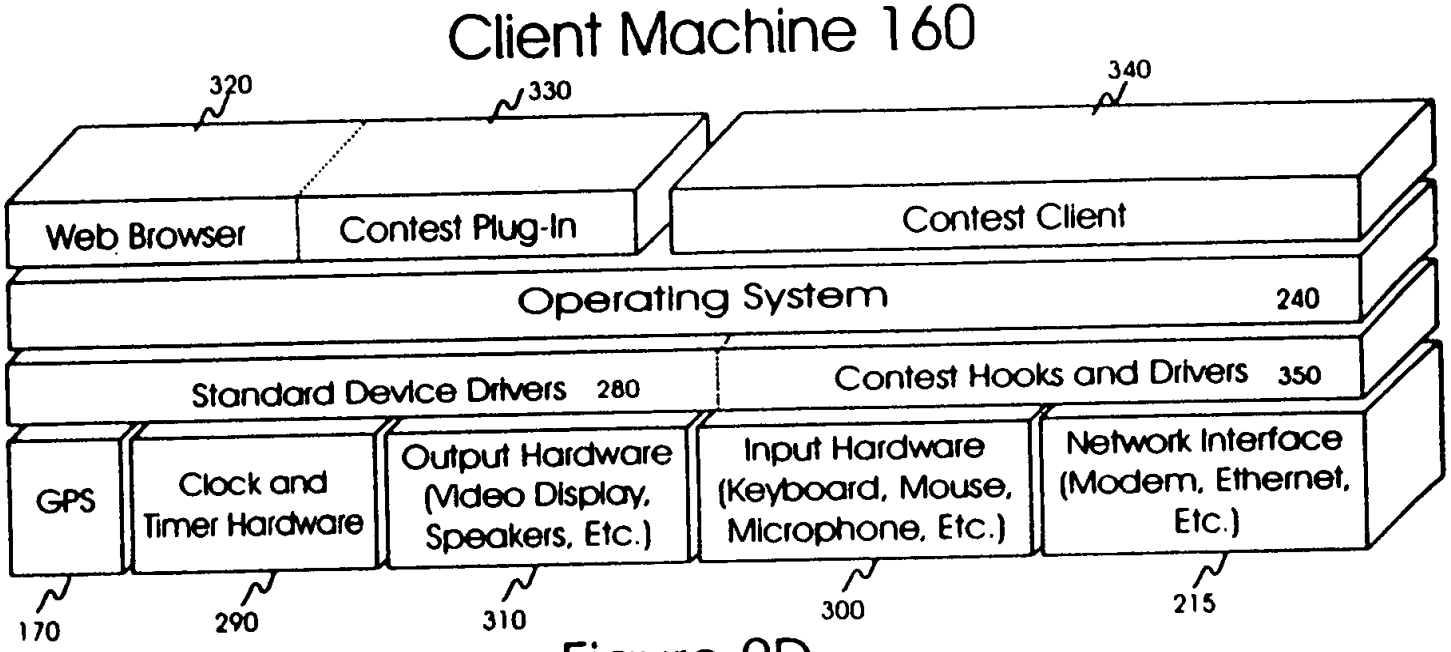

Figure 2D

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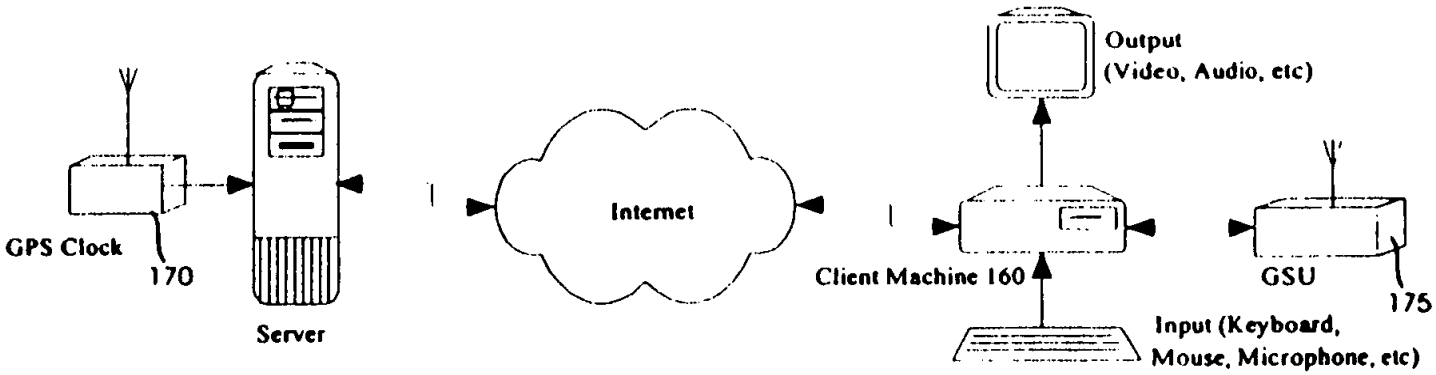
GPS Clock
170
Server
Internet
Output
(Video, Audio, etc)
Client Machine 160
GSU
175
Input (Keyboard,
Mouse, Microphone, etc)

Figure 2D1

Global Synchronization Unit 175

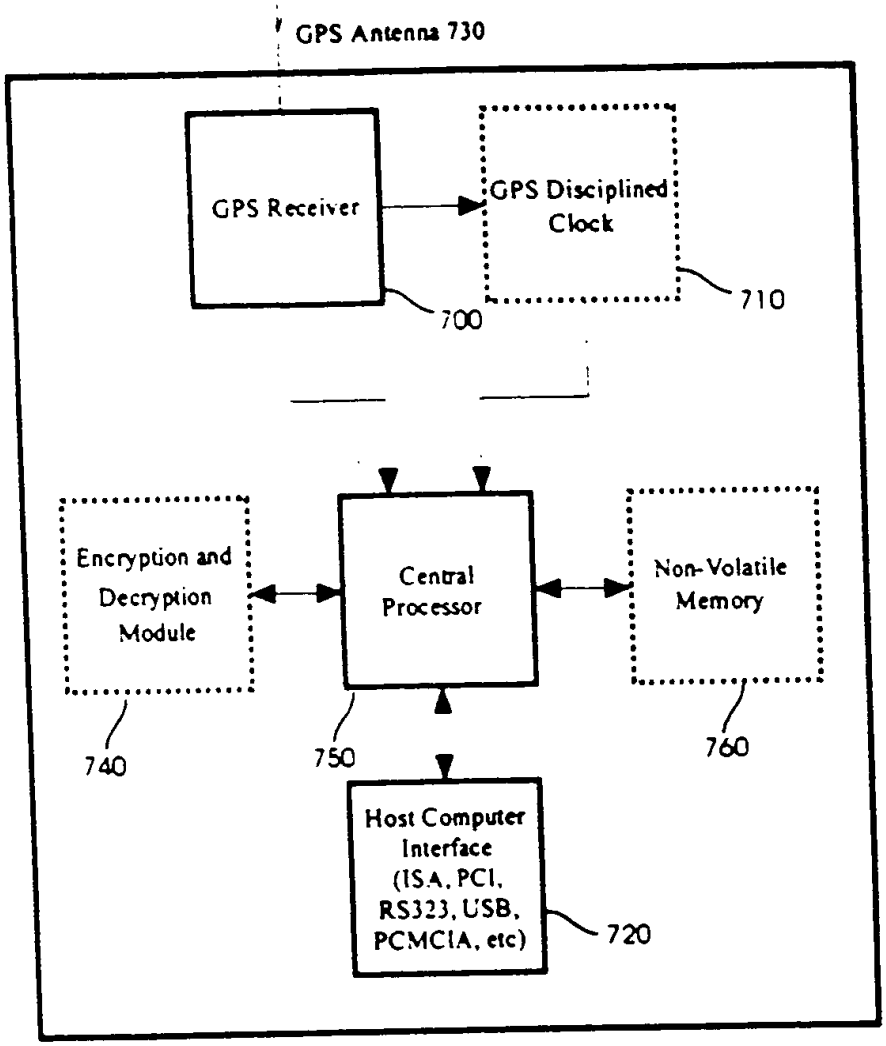

Figure 2D2

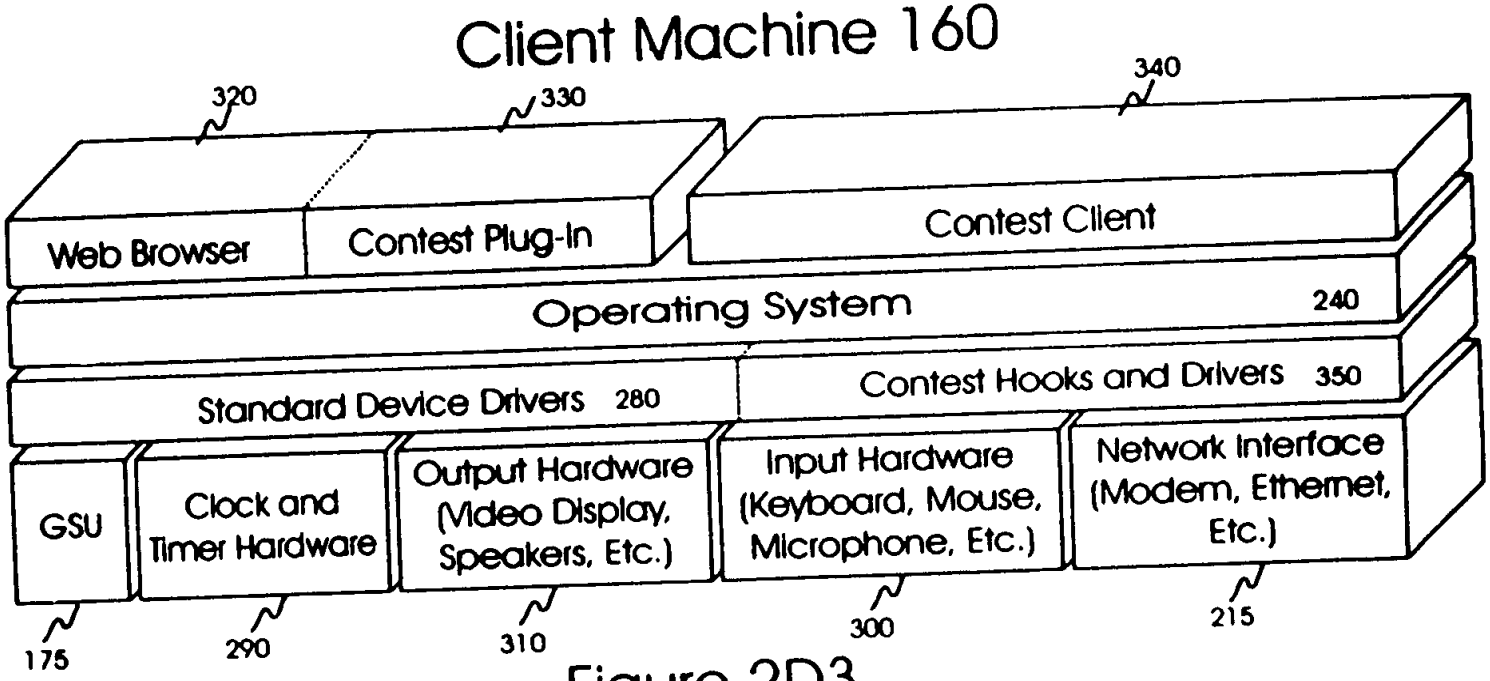
Client Machine 160
320
330
340
Web Browser
Contest Plug-In
Contest Client
Operating System
240
Standard Device Drivers 280
Contest Hooks and Drivers 350
GSU
Clock and Timer Hardware
Output Hardware (Video Display, Speakers, Etc.)
Input Hardware (Keyboard, Mouse, Microphone, Etc.)
Network Interface (Modem, Ethernet, Etc.)
175
290
310
300
215

Figure 2D3

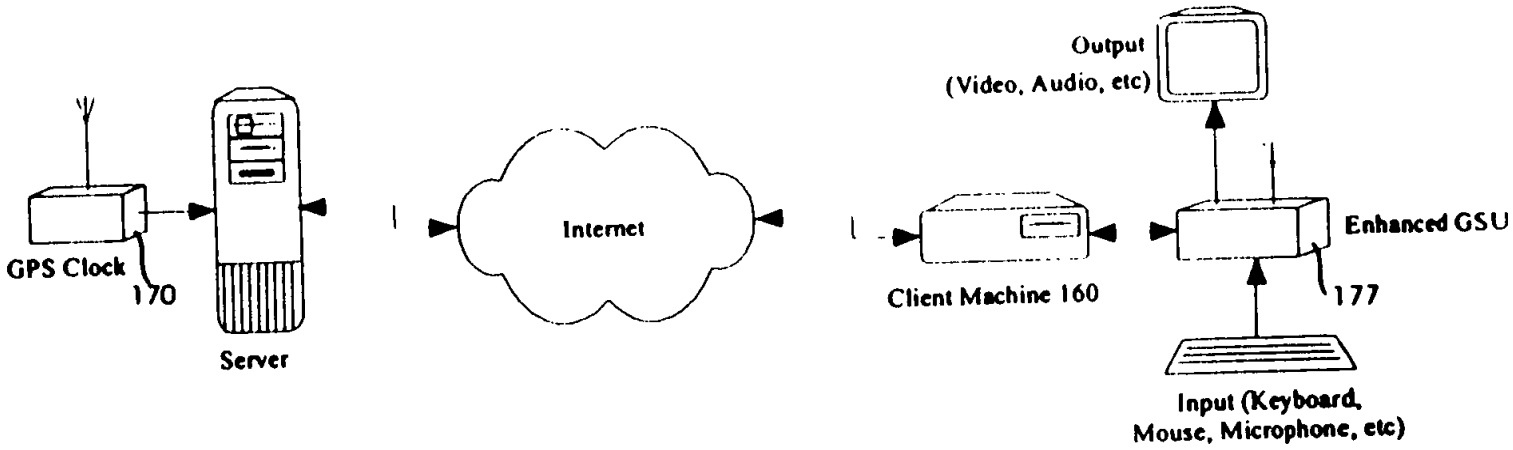
Output
(Video, Audio, etc)
GPS Clock
170
Server
Internet
Client Machine 160
Enhanced GSU
177
Input (Keyboard,
Mouse, Microphone, etc)

Figure 2D4

Enhanced Global Synchronization Unit 177

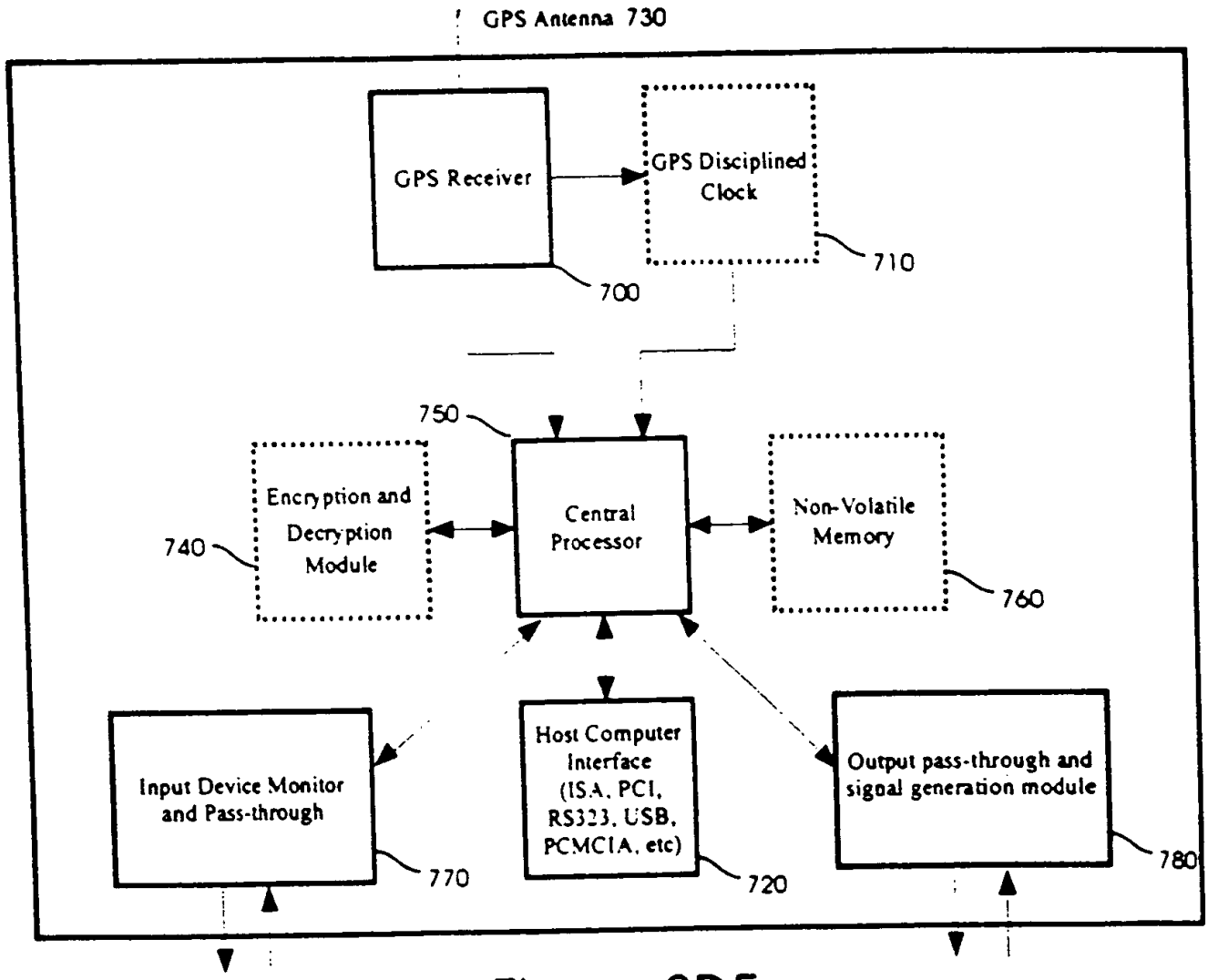

Figure 2D5

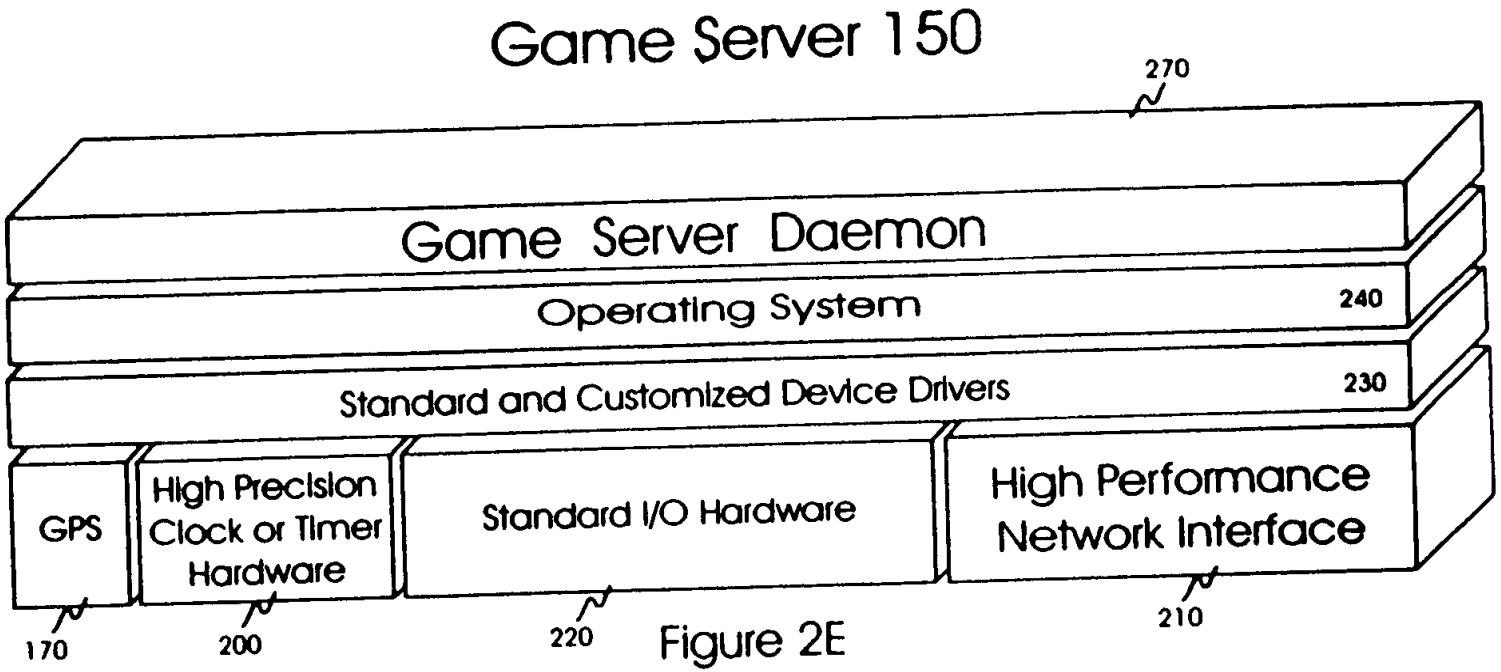

Figure 2E

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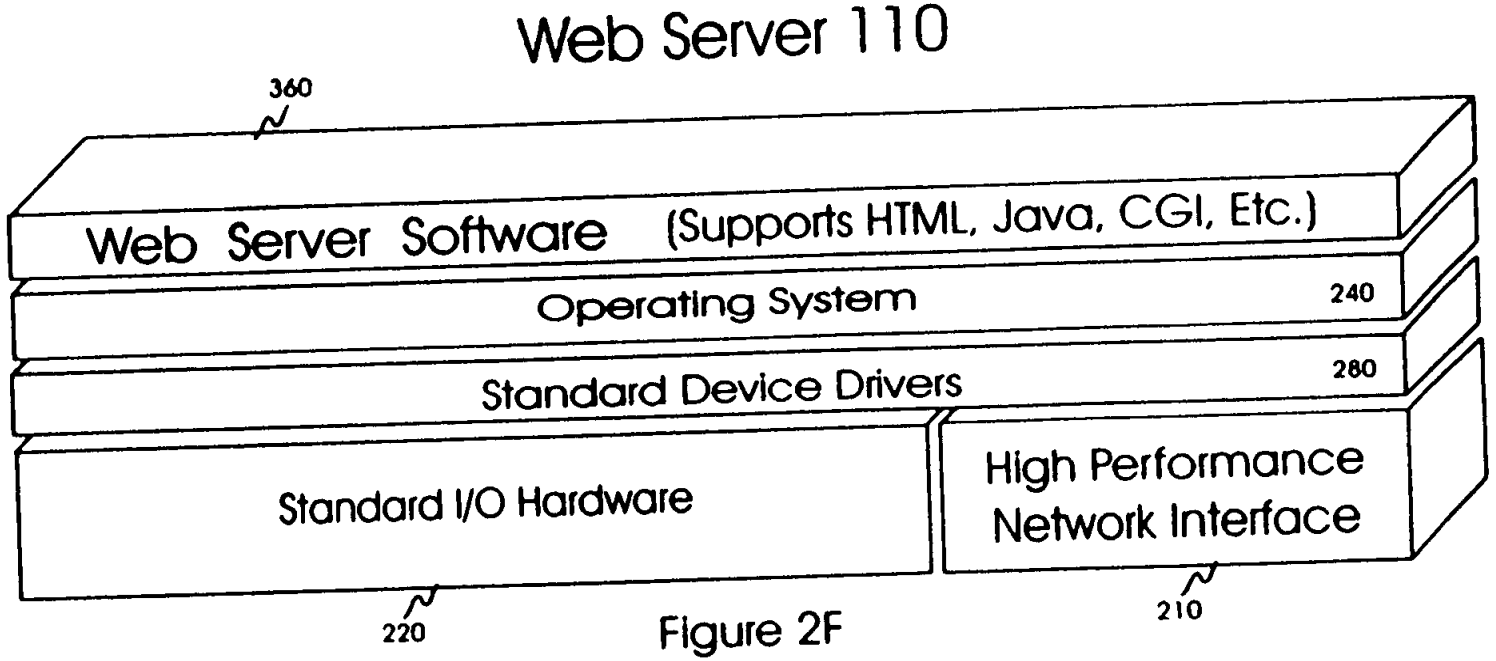
Web Server 110
360
Web Server Software (Supports HTML, Java, CGI, Etc.)
Operating System
240
Standard Device Drivers
280
Standard I/O Hardware
High Performance
Network Interface
220
210

Figure 2F

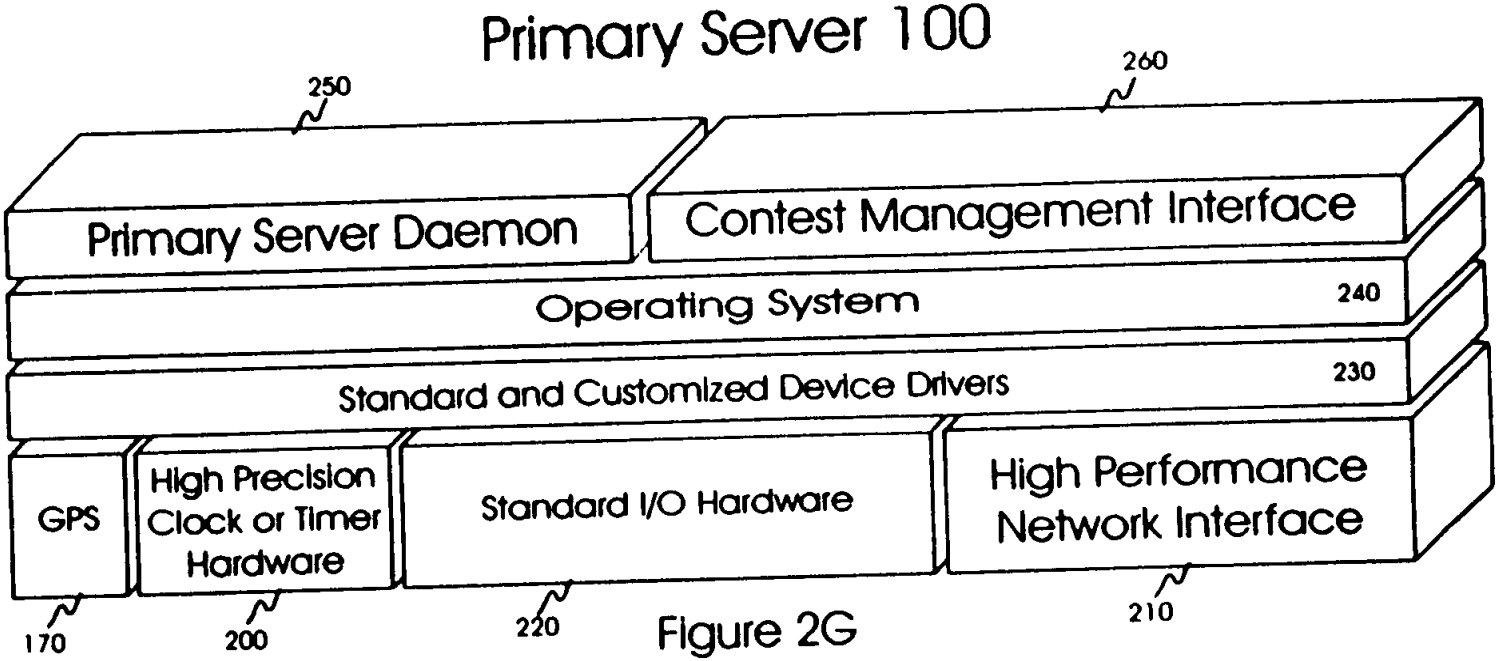
Primary Server 100
250
260
Primary Server Daemon
Contest Management Interface
Operating System
240
Standard and Customized Device Drivers
230
GPS
High Precision Clock or Timer Hardware
Standard I/O Hardware
High Performance Network Interface
170
200
220
210

Figure 2G

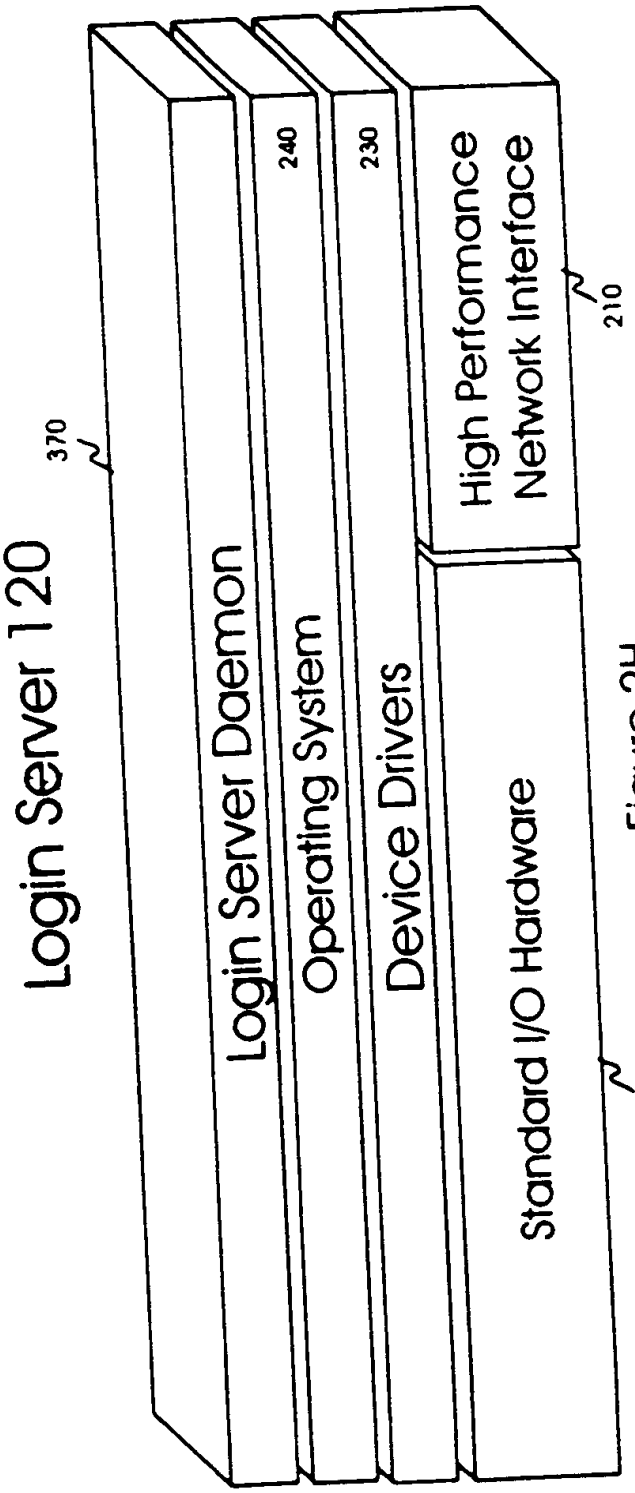
Login Server 120
370
Login Server Daemon
240
Operating System
230
Device Drivers
High Performance
Network Interface
210
Standard I/O Hardware
220

Figure 2H

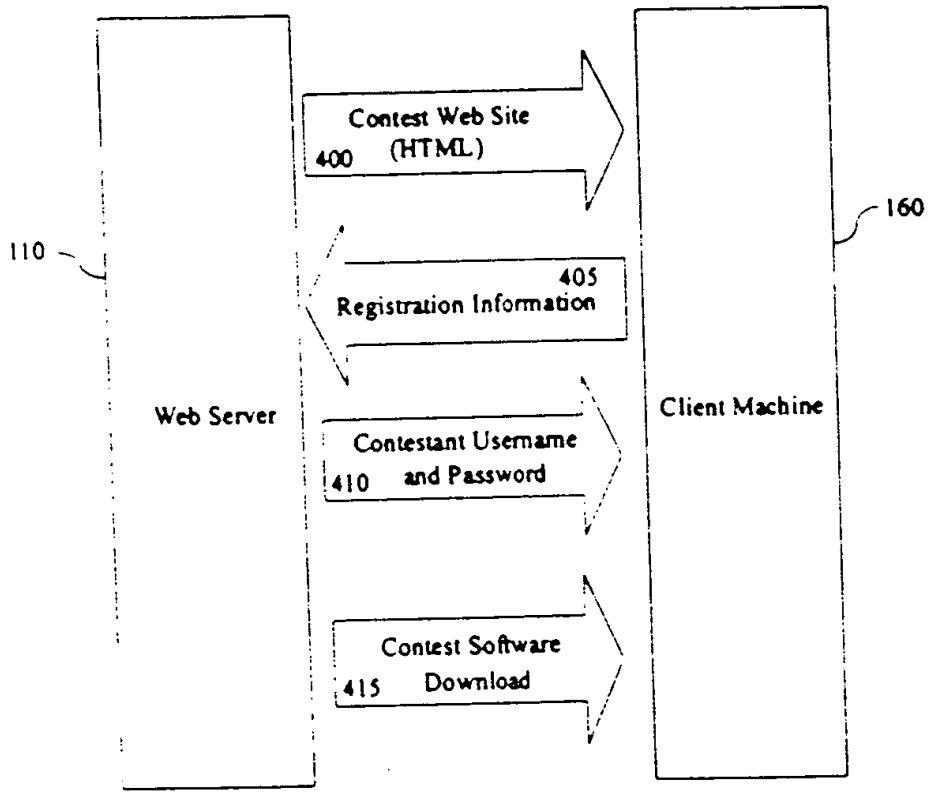
110
Web Server
Contest Web Site
400 (HTML)
405
Registration Information
Contestant Username
410 and Password
Contest Software
415 Download
Client Machine
160

Figure 3A

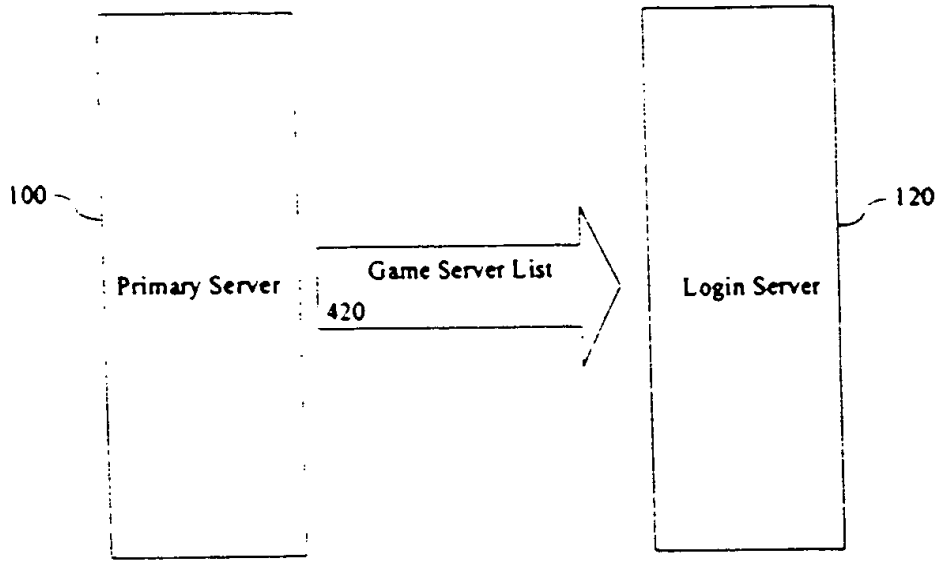

Figure 3B

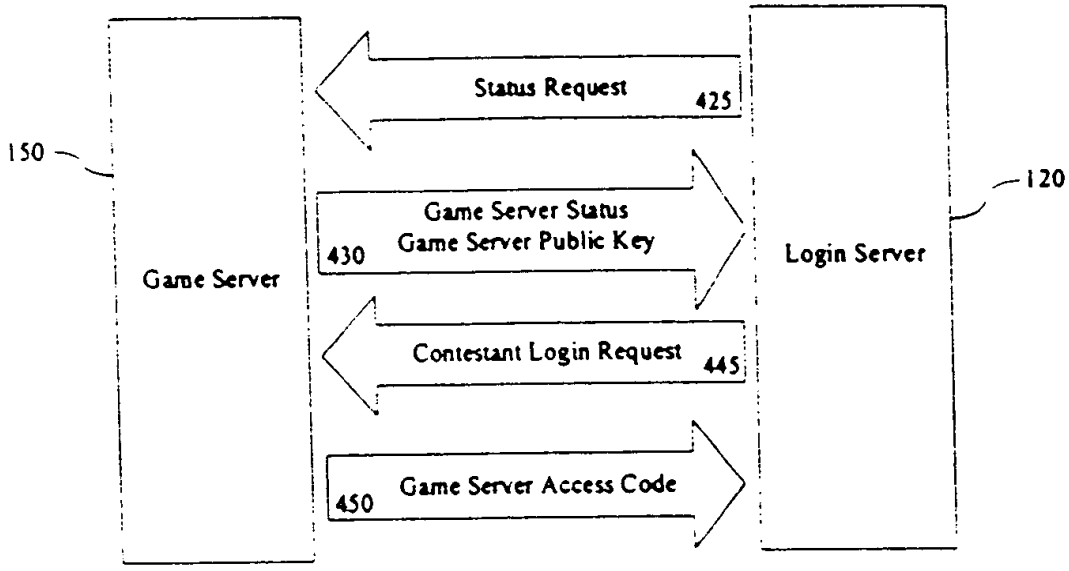
150
Game Server
Status Request
425
Game Server Status
Game Server Public Key
430
Contestant Login Request
445
Game Server Access Code
450
Login Server
120

Figure 3C

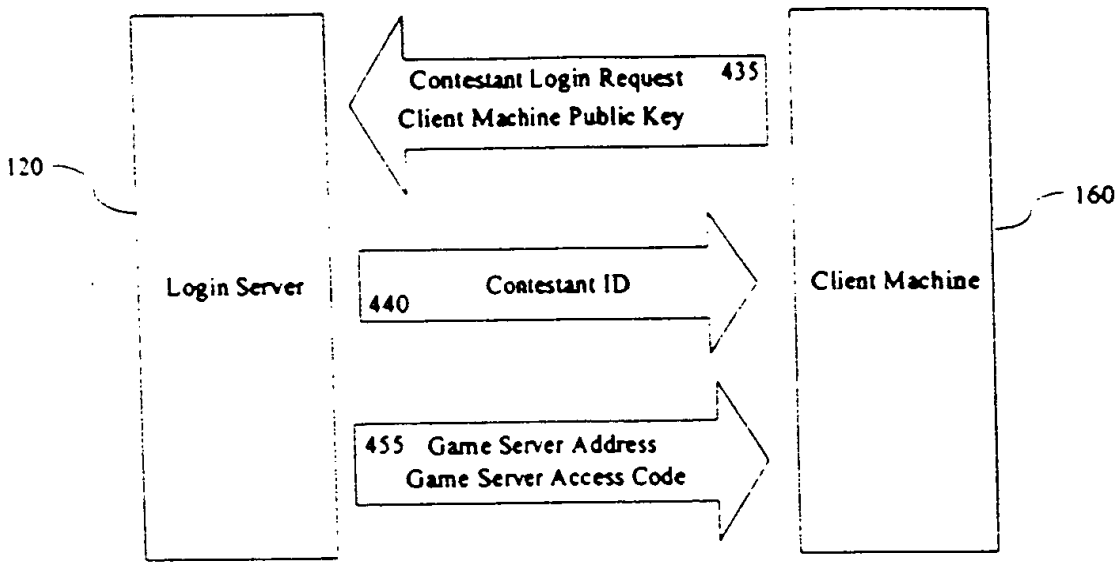
120
Login Server
Contestant Login Request 435
Client Machine Public Key
Contestant ID
440
455 Game Server Address
Game Server Access Code
Client Machine
160

Figure 3D

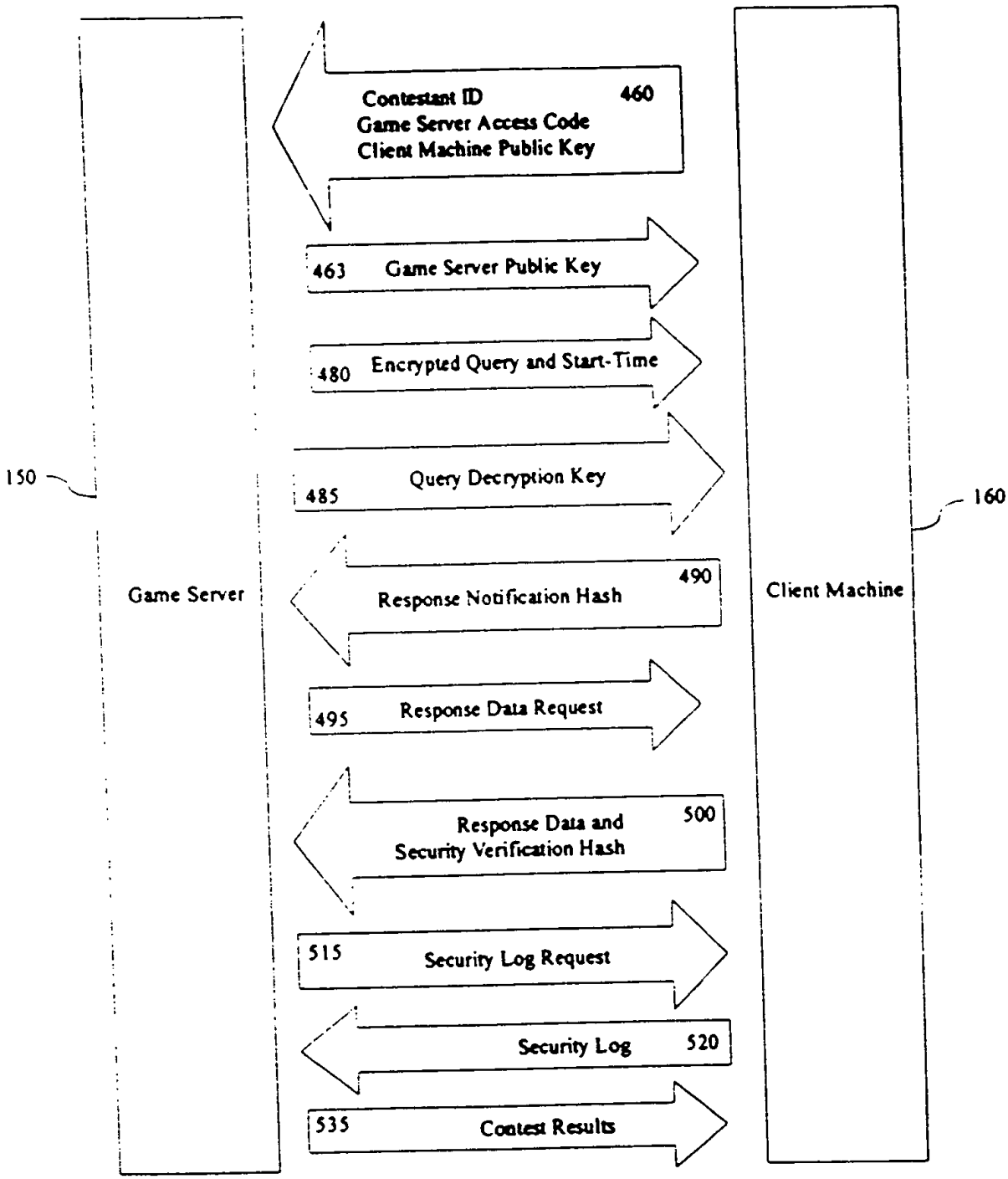
Contestant ID
Game Server Access Code
Client Machine Public Key
460
463 Game Server Public Key
480 Encrypted Query and Start-Time
Query Decryption Key
485
150
Game Server
Response Notification Hash
490
Client Machine
160
495 Response Data Request
Response Data and
Security Verification Hash
500
515 Security Log Request
Security Log
520
535 Contest Results

Figure 3E

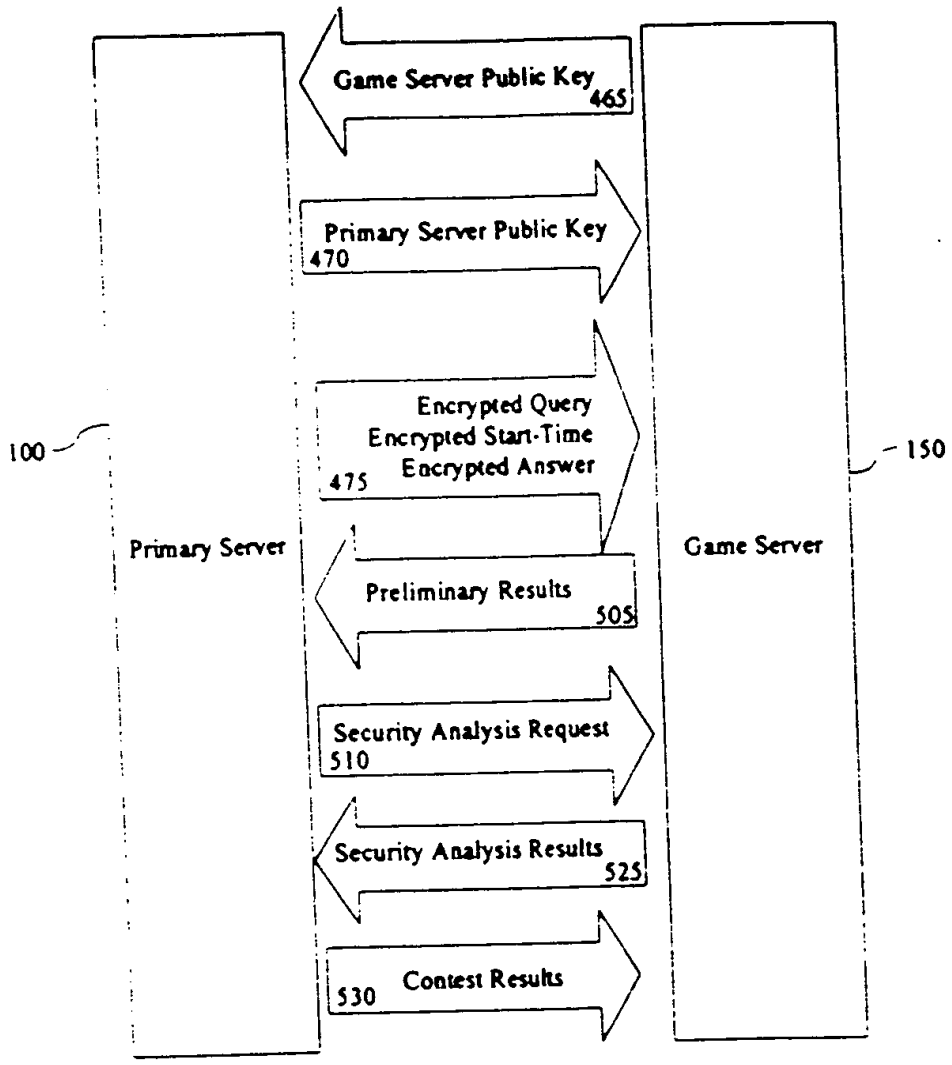
Game Server Public Key
465
Primary Server Public Key
470
Encrypted Query
Encrypted Start-Time
Encrypted Answer
475
100
150
Primary Server
Game Server
Preliminary Results
505
Security Analysis Request
510
Security Analysis Results
525
Contest Results
530

Figure 3F

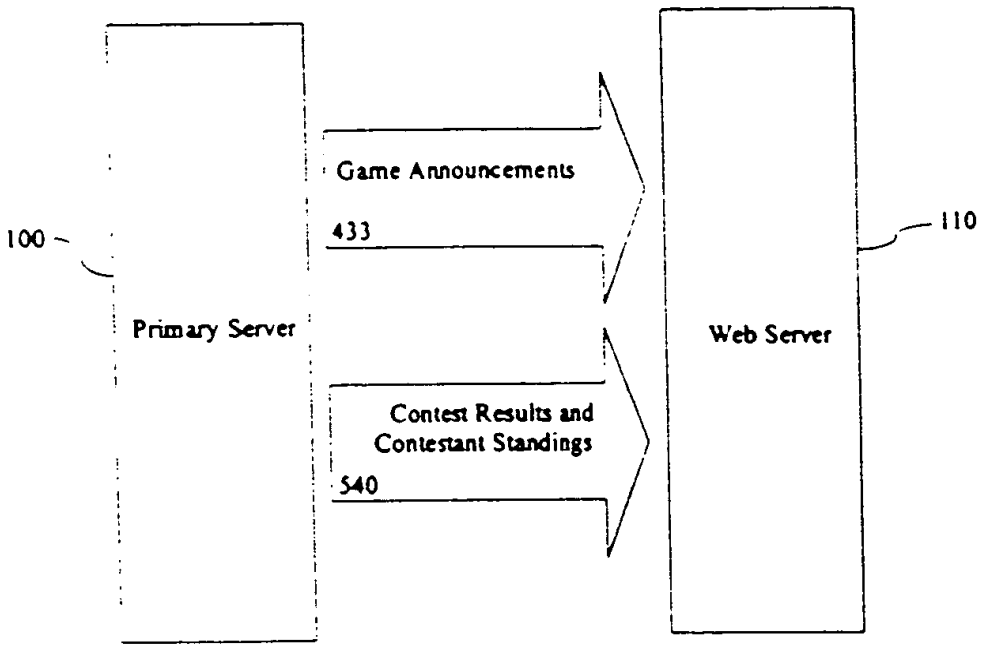
100
Primary Server
Game Announcements
433
Contest Results and
Contestant Standings
540
Web Server
110

Figure 3G

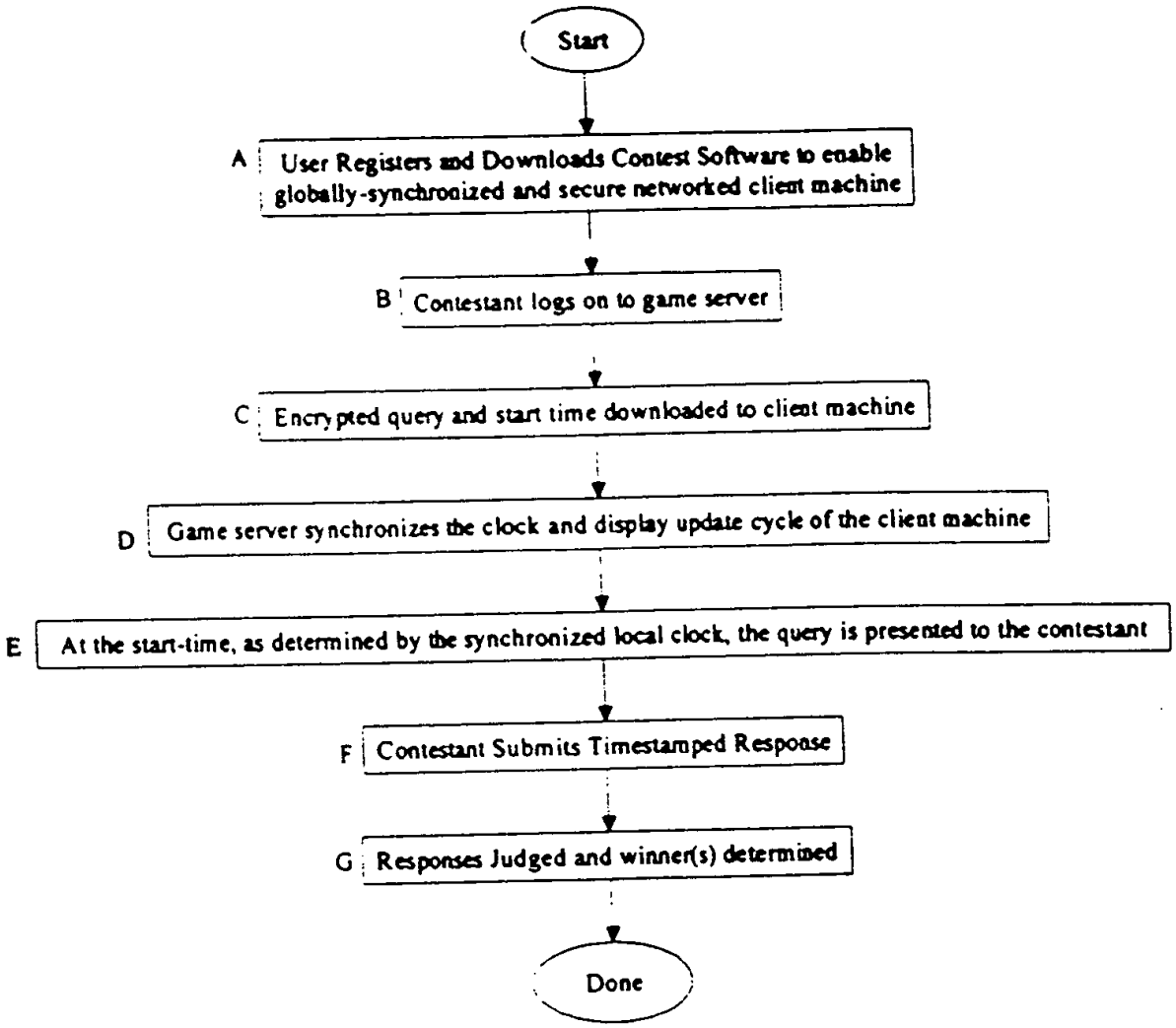
Start
A
User Registers and Downloads Contest Software to enable globally-synchronized and secure networked client machine
B
Contestant logs on to game server
C
Encrypted query and start time downloaded to client machine
D
Game server synchronizes the clock and display update cycle of the client machine
E
At the start-time, as determined by the synchronized local clock, the query is presented to the contestant
F
Contestant Submits Timestamped Response
G
Responses Judged and winner(s) determined
Done

Figure 4

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User Registers and Downloads Contest Software

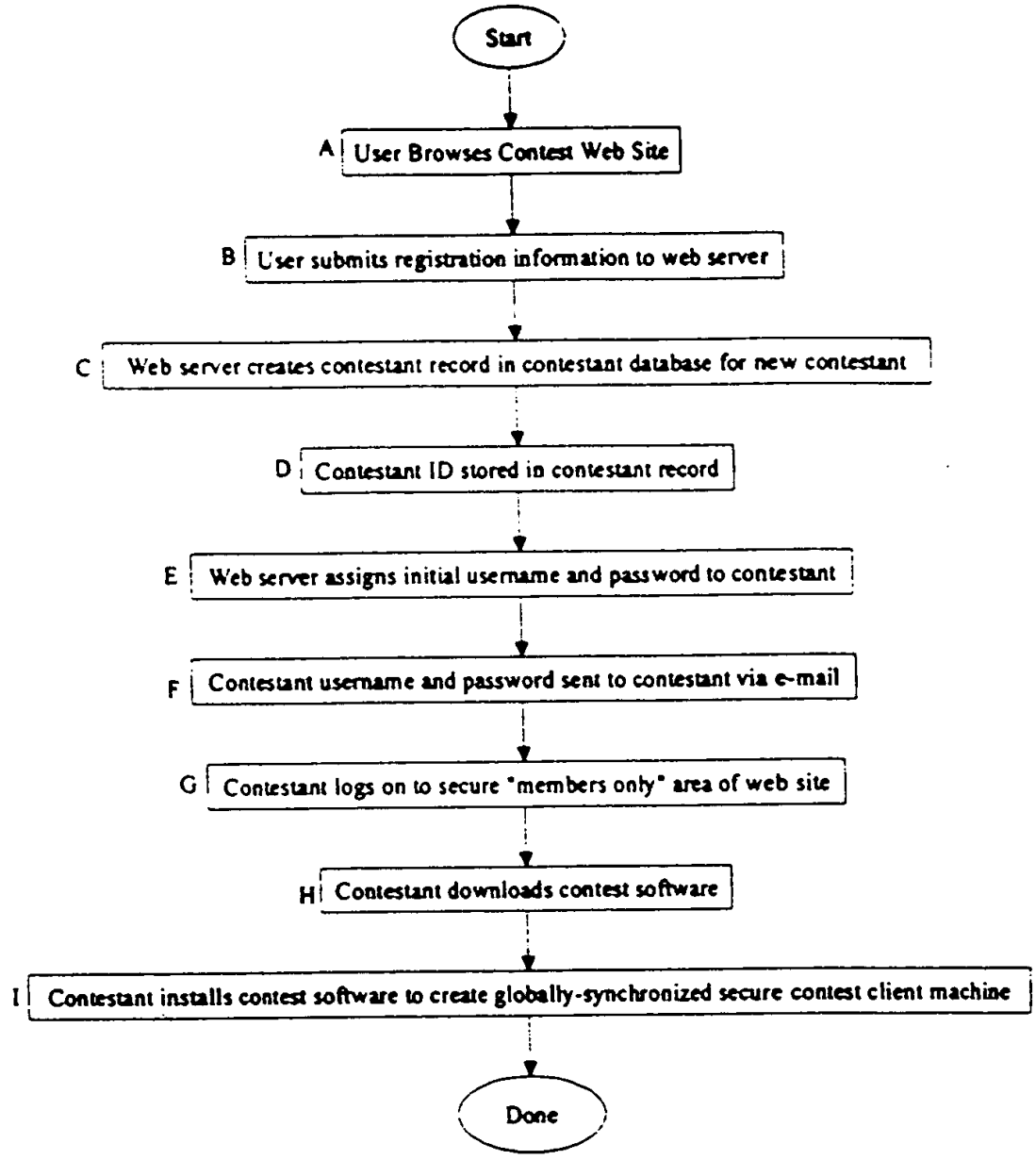

Figure 4A

Contestant logs on to game server

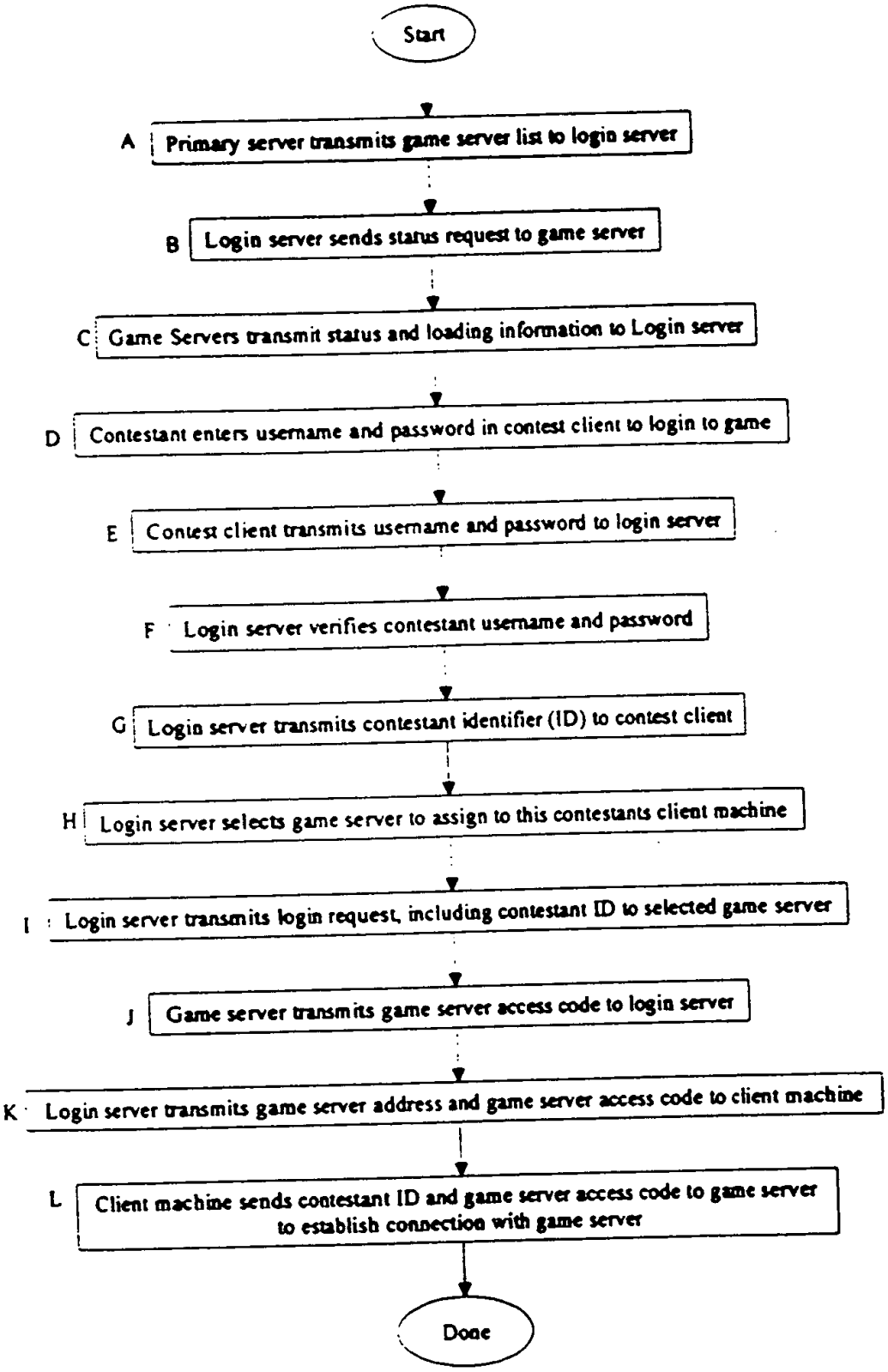

Figure 4B

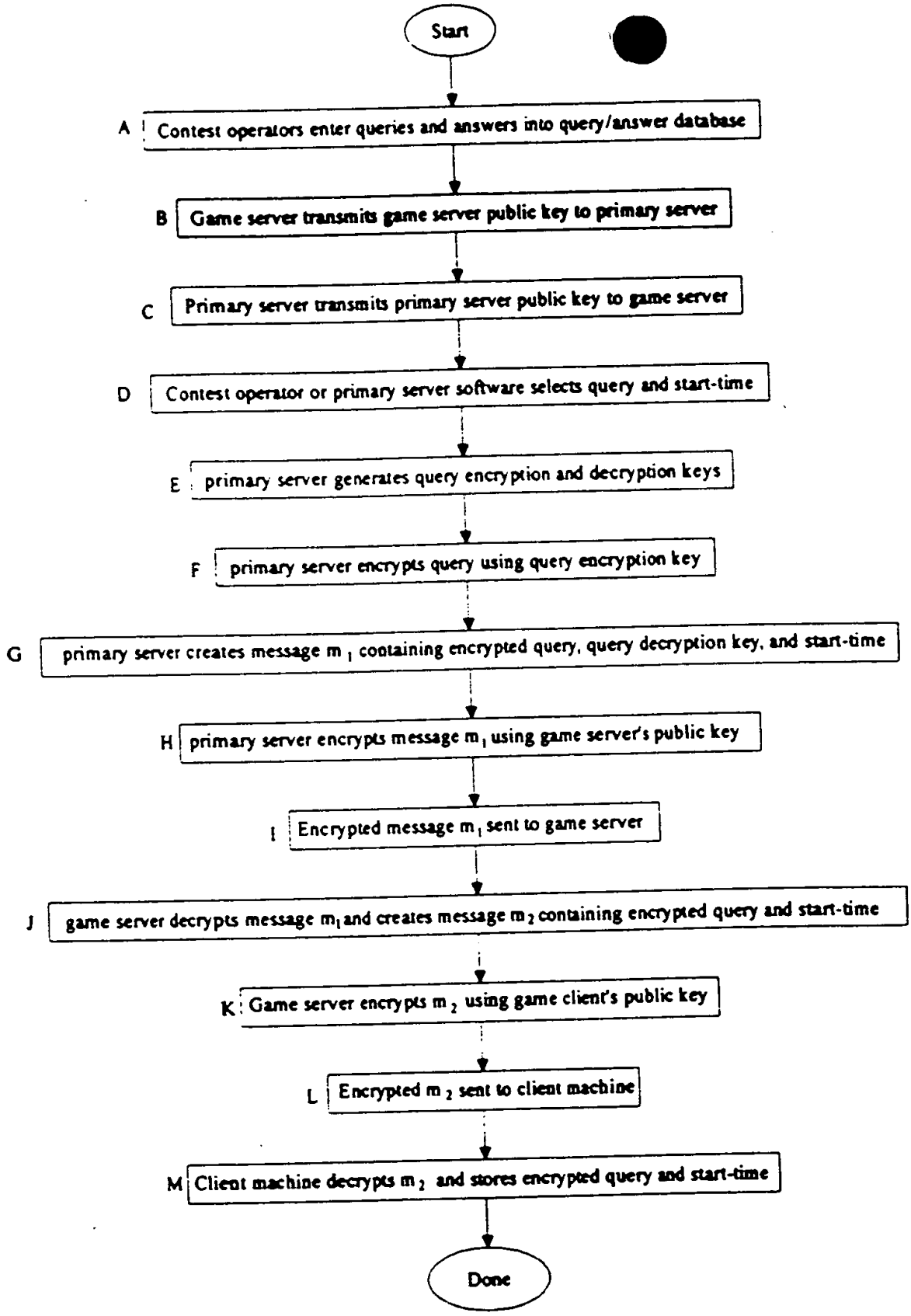
Start
A Contest operators enter queries and answers into query/answer database
B Game server transmits game server public key to primary server
C Primary server transmits primary server public key to game server
D Contest operator or primary server software selects query and start-time
E primary server generates query encryption and decryption keys
F primary server encrypts query using query encryption key
G primary server creates message m 1 containing encrypted query, query decryption key, and start-time
H primary server encrypts message m 1 using game server's public key
I Encrypted message m 1 sent to game server
J game server decrypts message m1 and creates message m 2 containing encrypted query and start-time
K Game server encrypts m 2 using game client's public key
L Encrypted m 2 sent to client machine
M Client machine decrypts m 2 and stores encrypted query and start-time
Done

Figure 4C

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Client machine clock characterized and display update cycle synchronized with global clock

(Client Machine With Basic GSU)

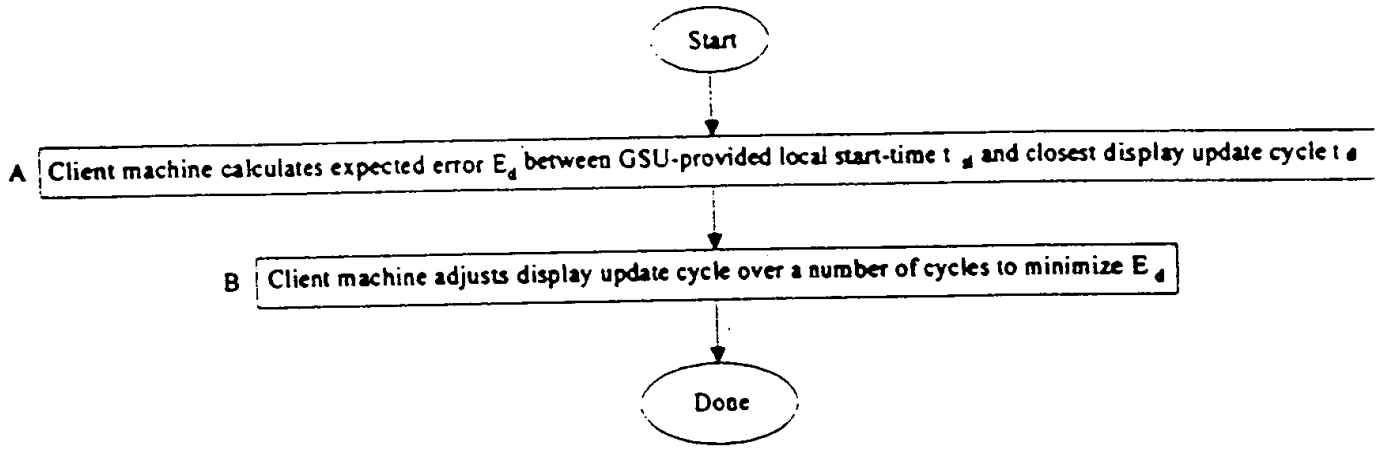

Figure 4D1

Client machine clock characterized and display update cycle synchronized with global clock

(Client Machine With Enhanced GSU)

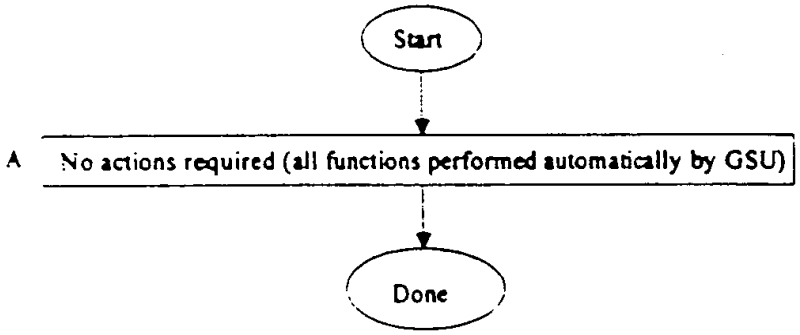

Figure 4D2

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Client machine clock characterized and display update cycle synchronized with global clock

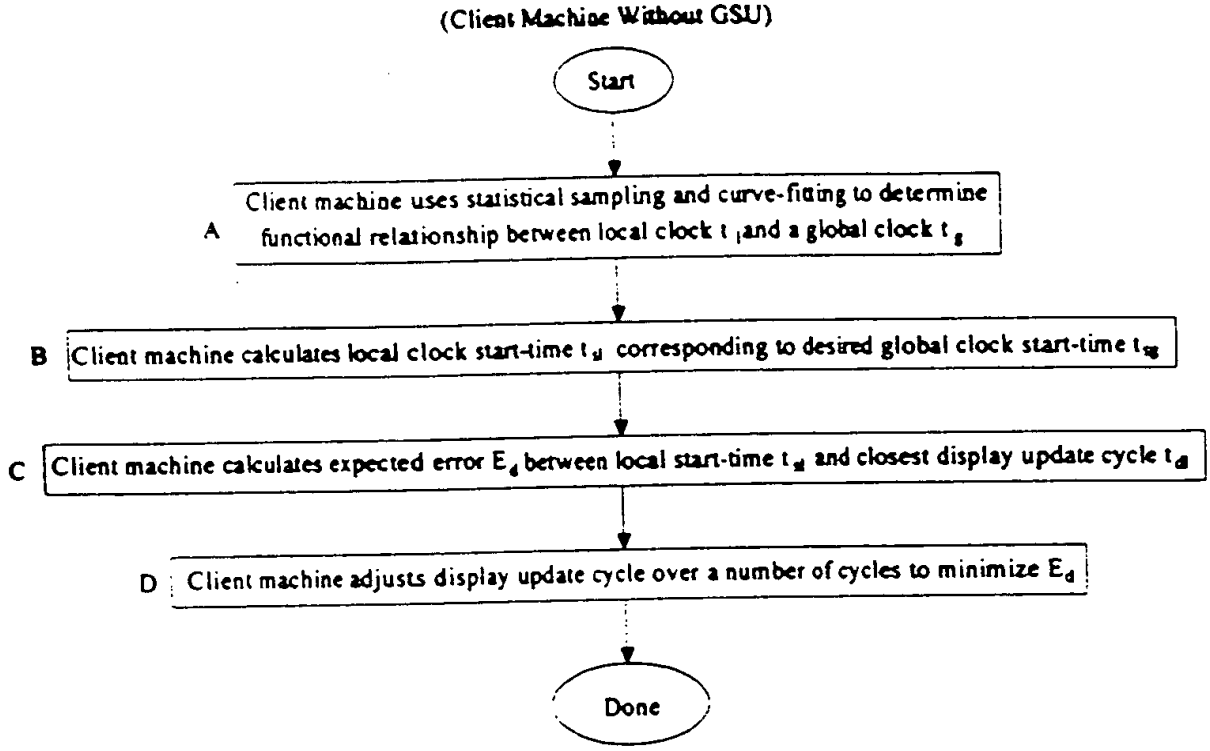

Figure 4D3

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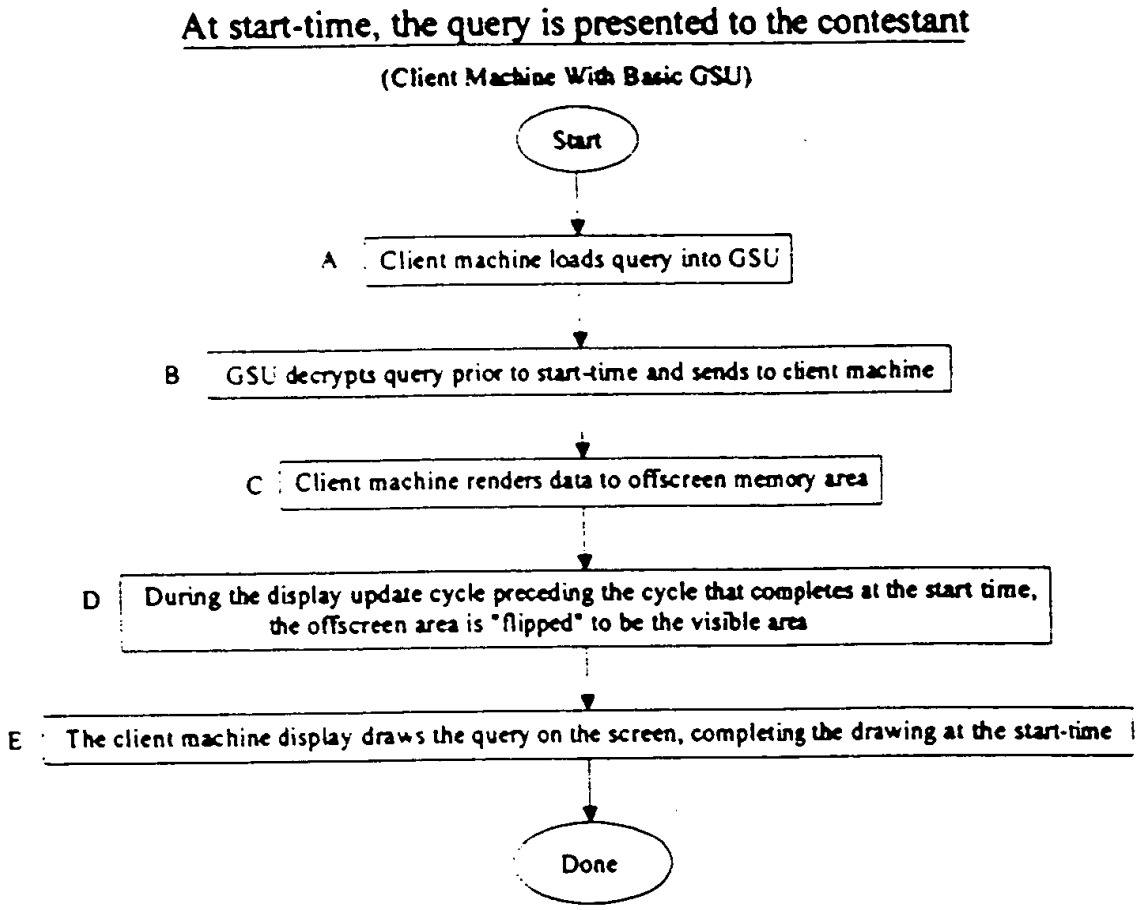

Figure 4E1

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At start-time, the query is presented to the contestant

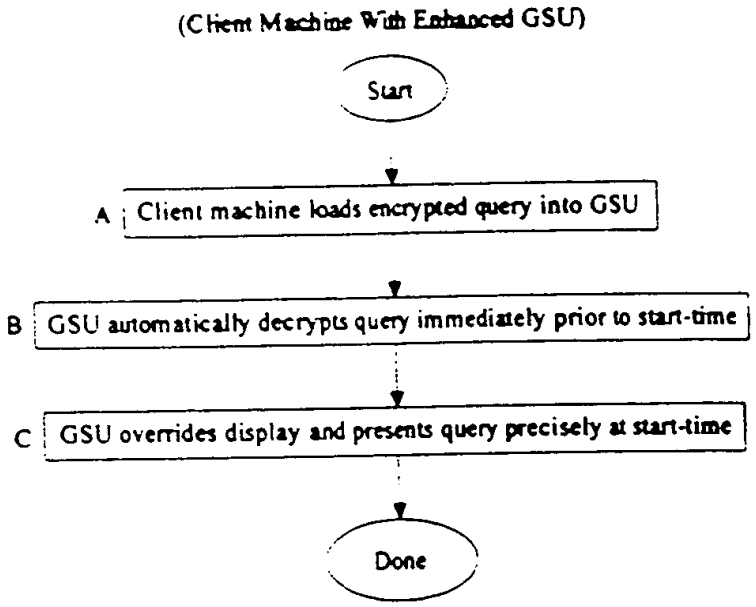

Figure 4E2

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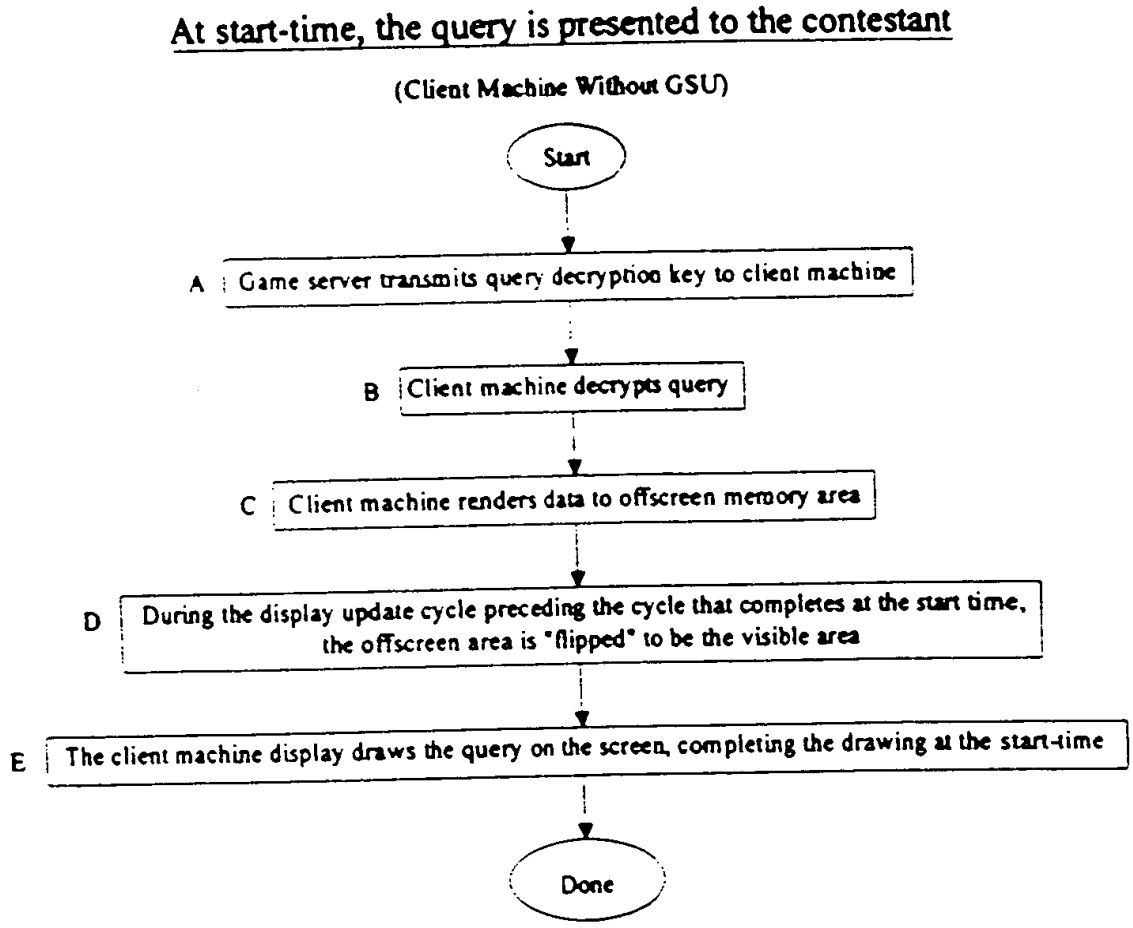

Figure 4E3

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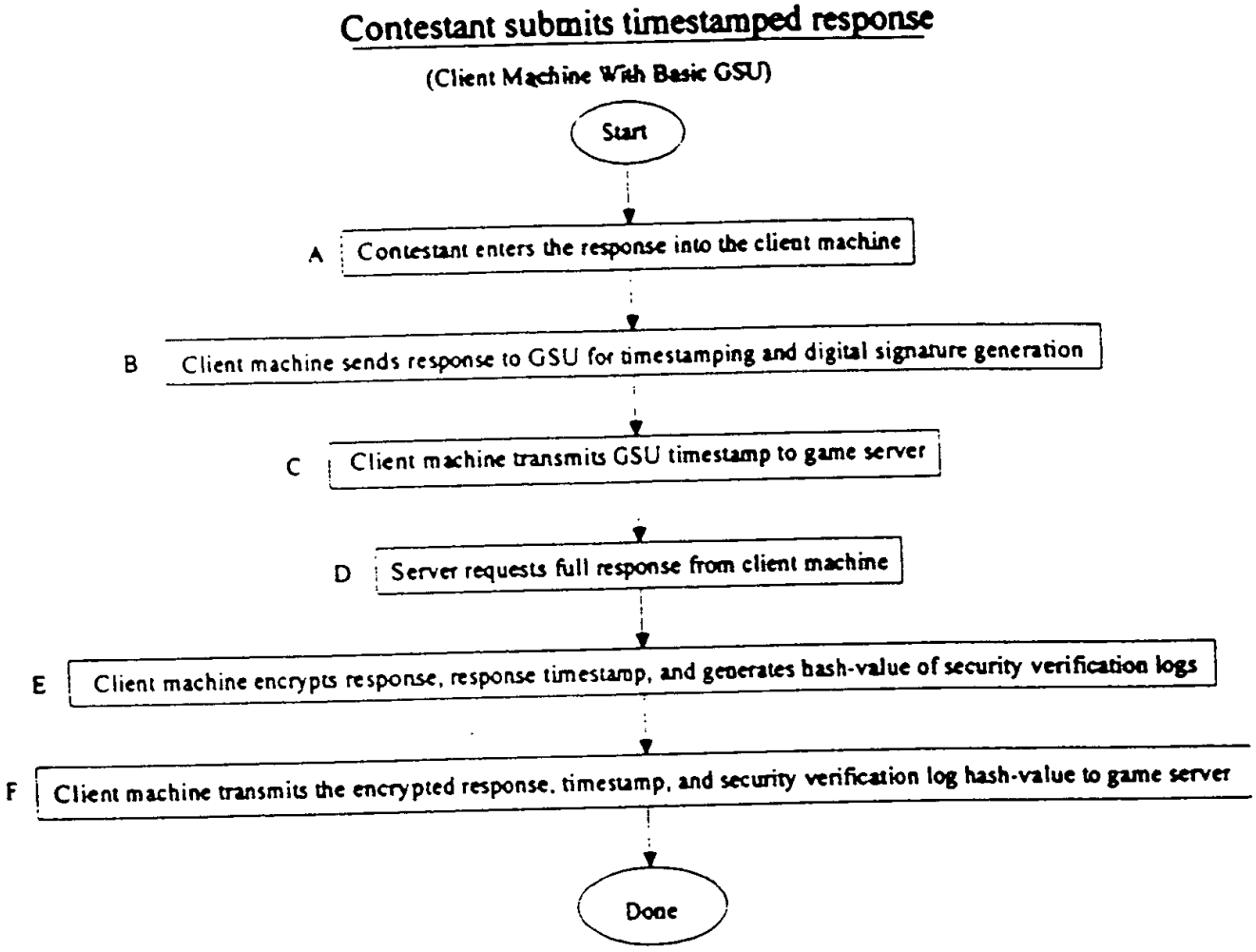

Figure 4F1

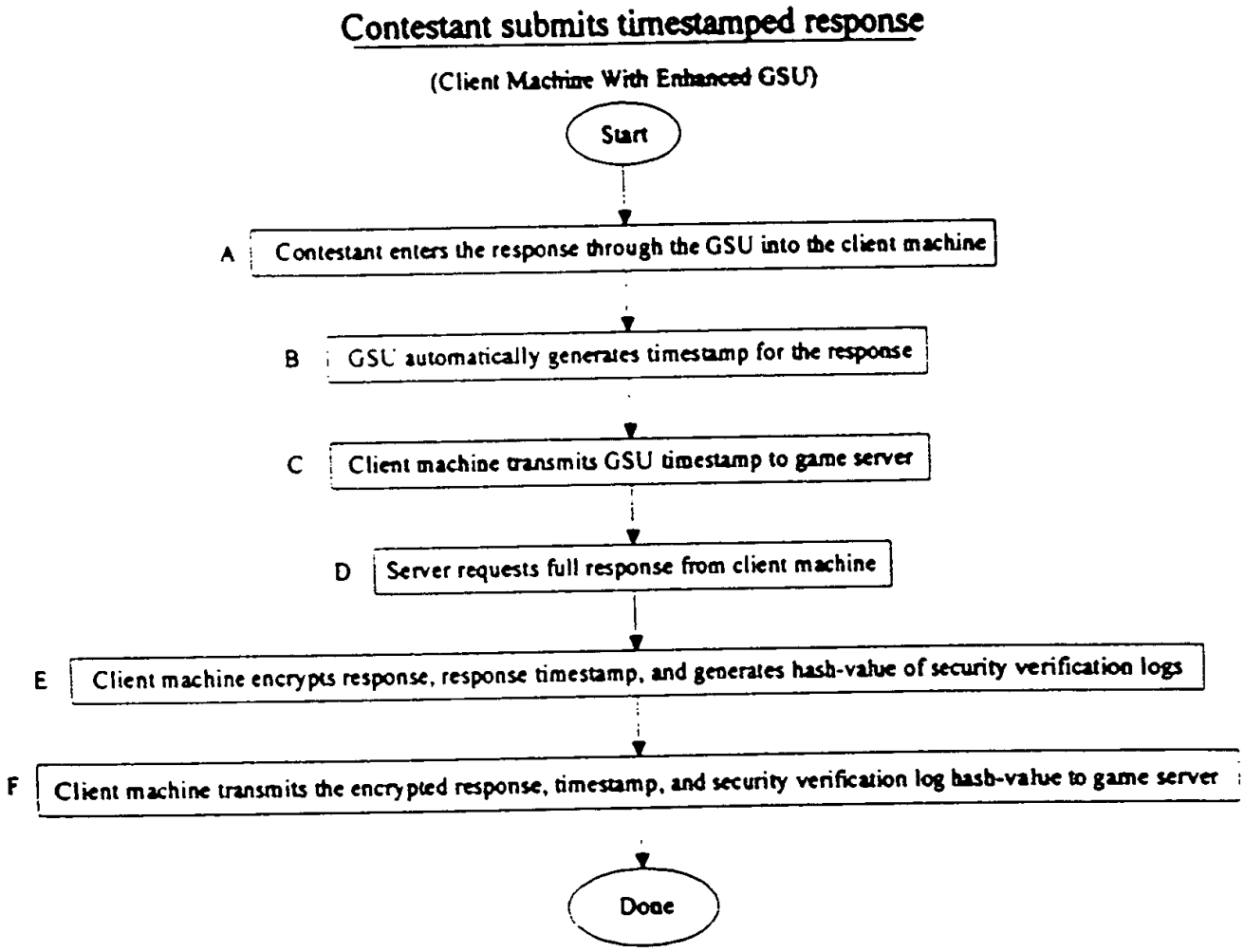
Contestant submits timestamped response
(Client Machine With Enhanced GSU)
Start
A
Contestant enters the response through the GSU into the client machine
B
GSU automatically generates timestamp for the response
C
Client machine transmits GSU timestamp to game server
D
Server requests full response from client machine
E
Client machine encrypts response, response timestamp, and generates hash-value of security verification logs
F
Client machine transmits the encrypted response, timestamp, and security verification log hash-value to game server
Done

Figure 4F2

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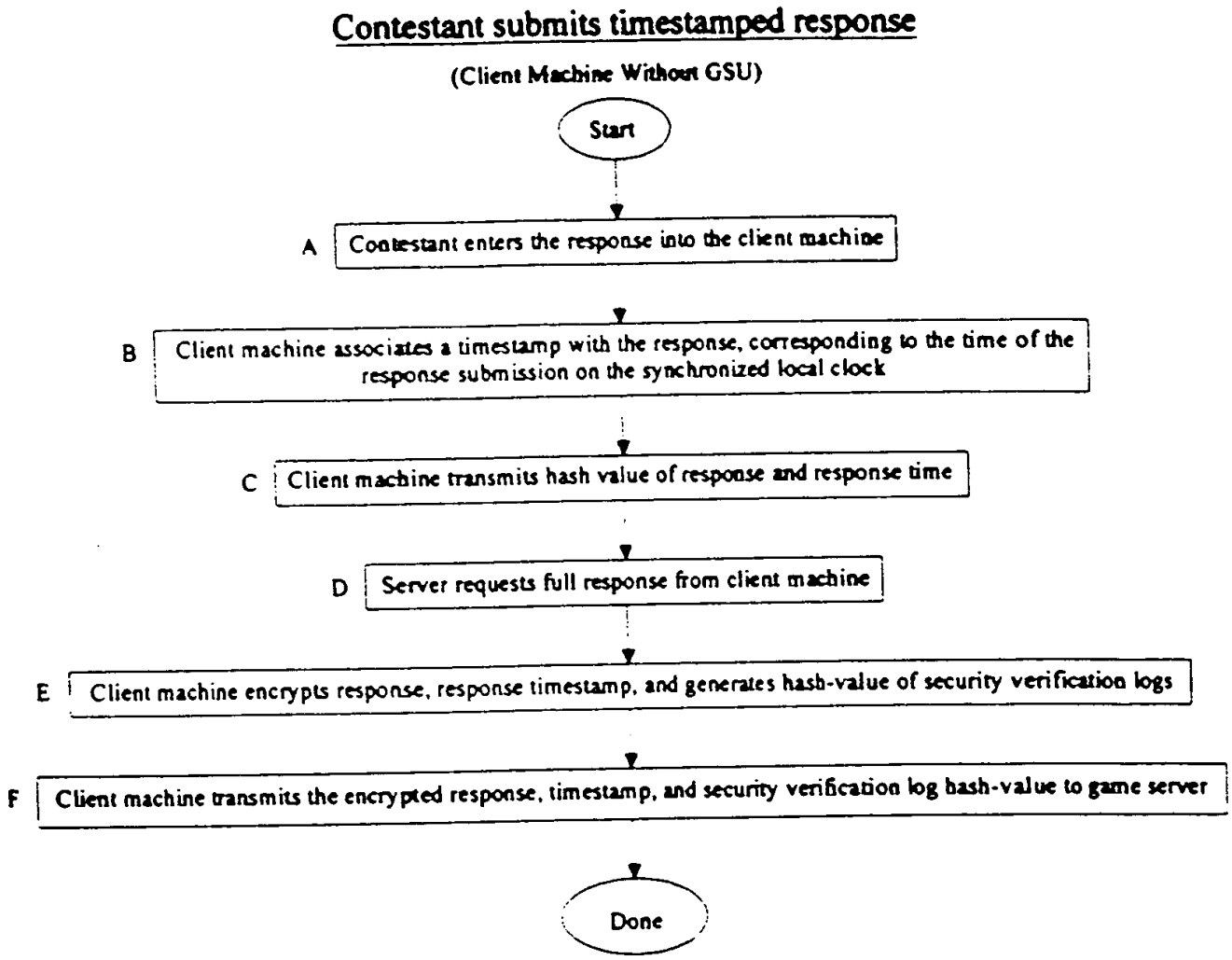

Figure 4F3

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[redacted]ponses Judged and Winners De[redacted]ined

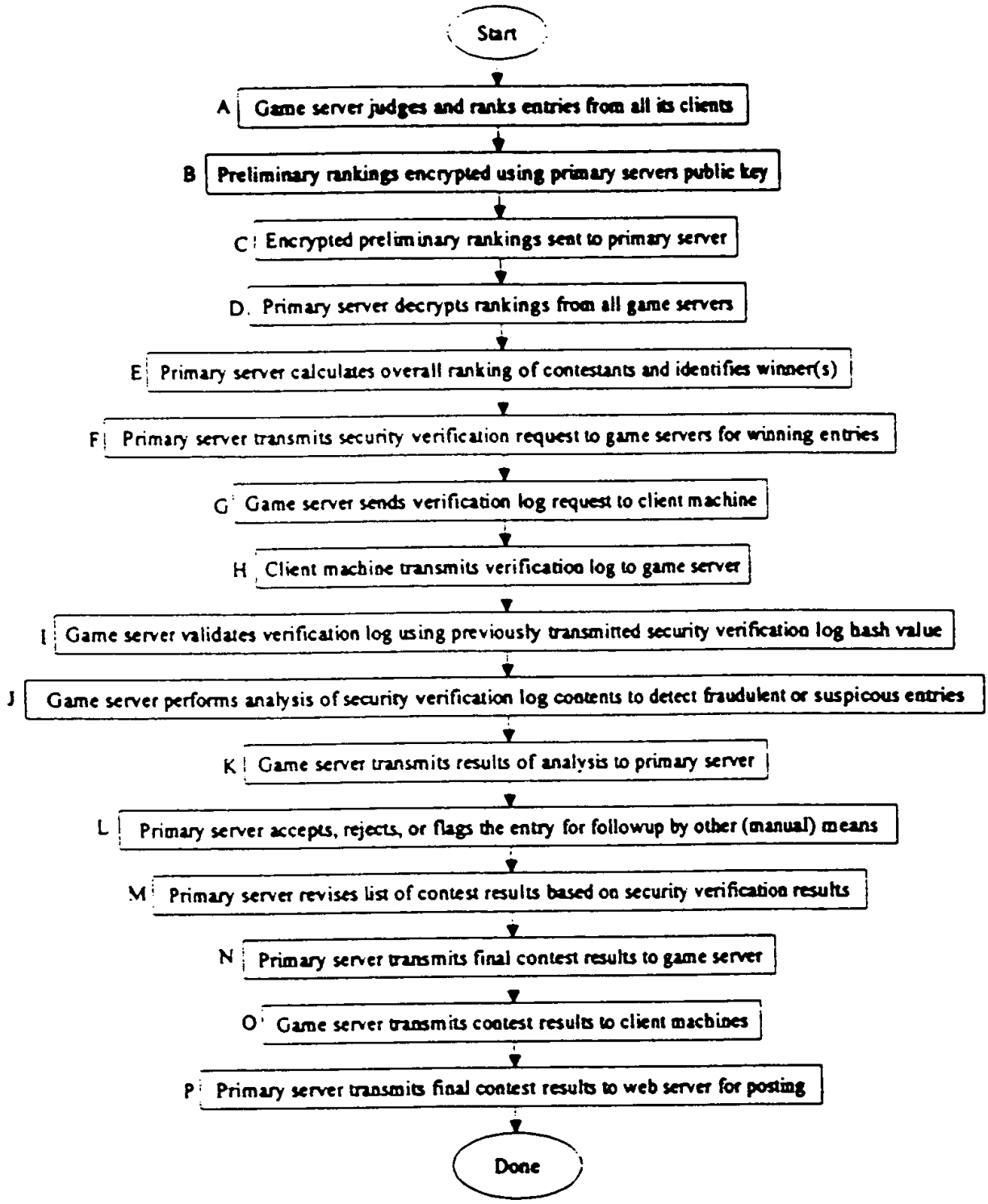

Figure 4G

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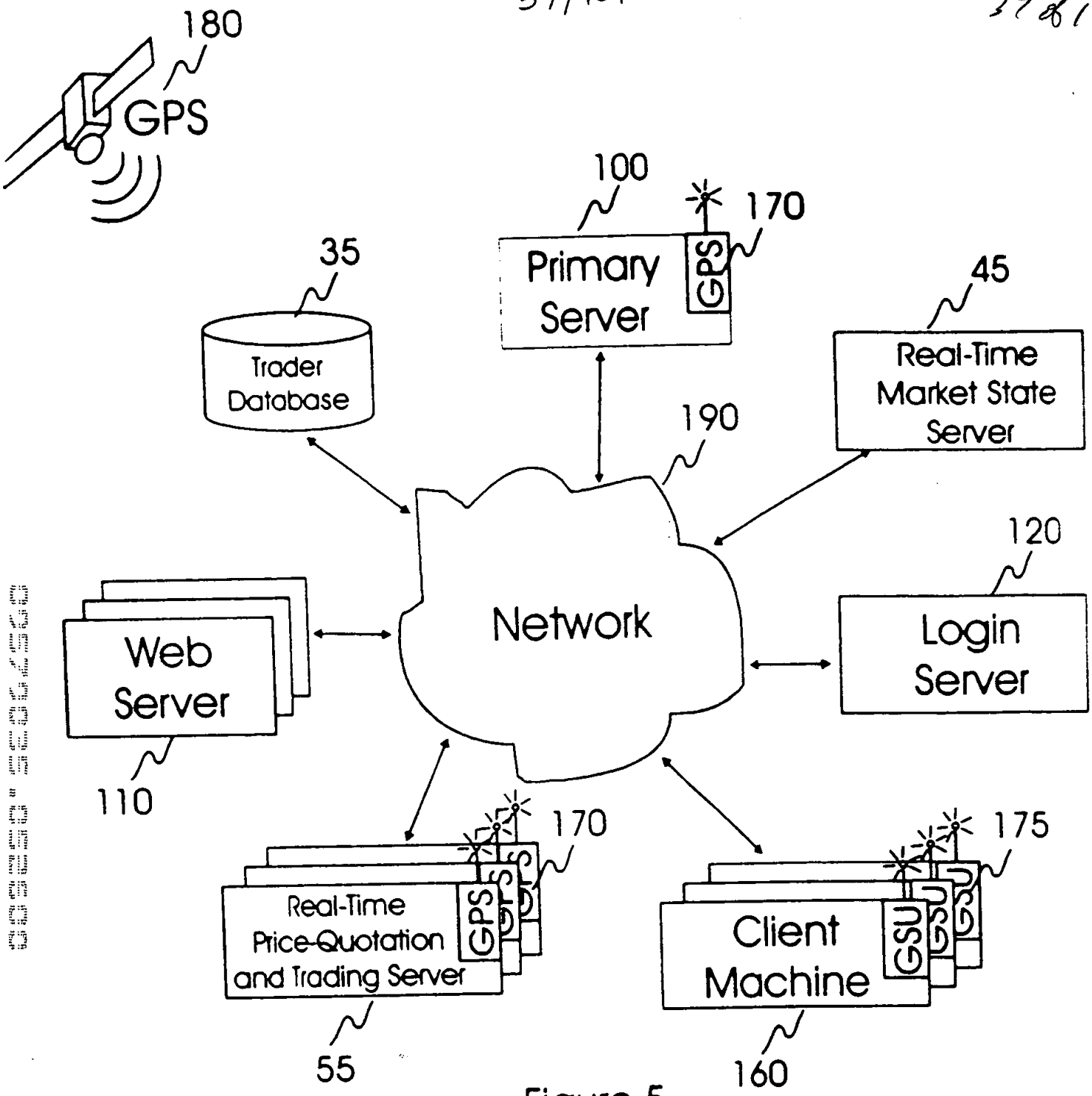

Figure 5

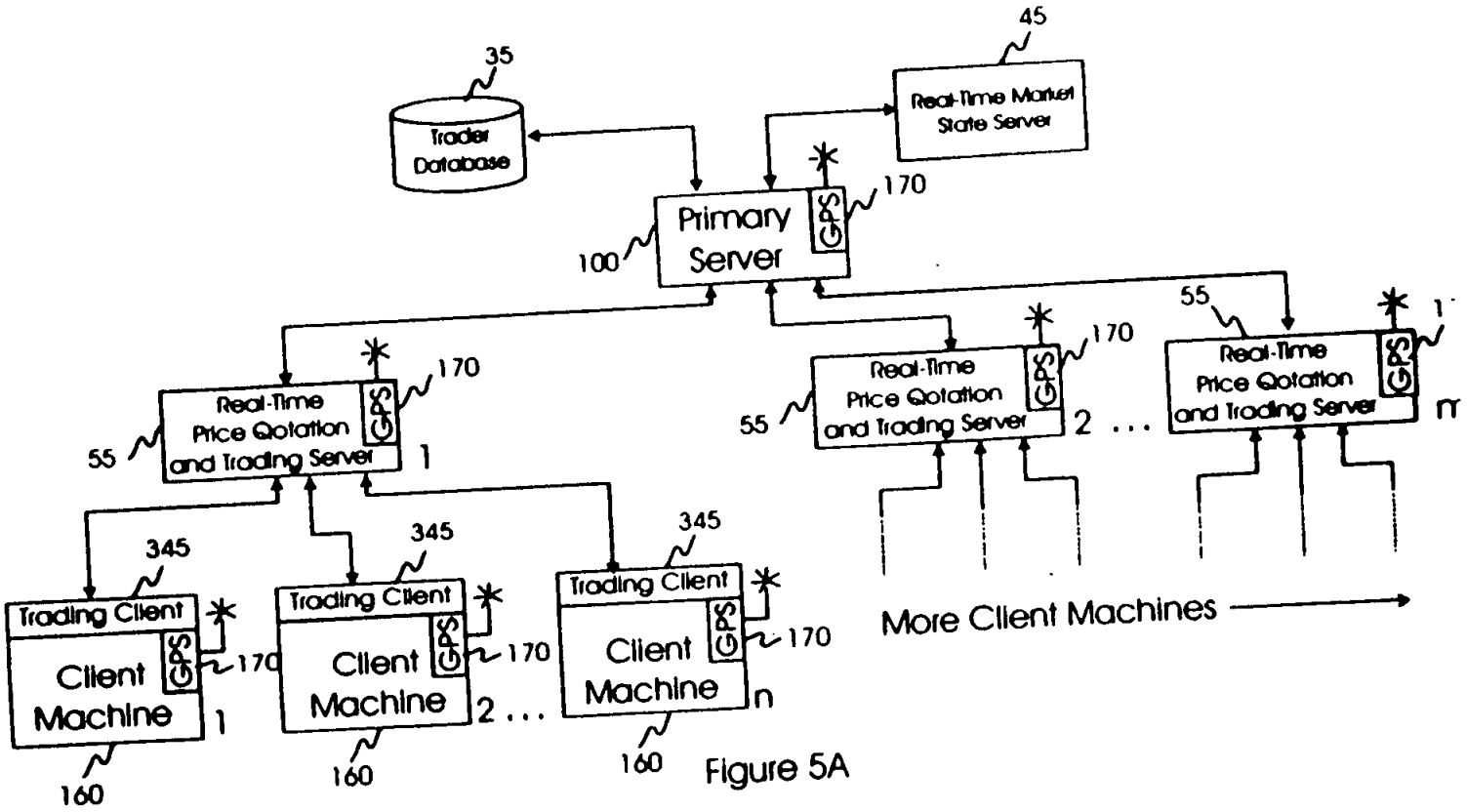
35
Trader Database
45
Real-Time Market State Server
Primary Server
GPS
100
170
55
Real-Time Price Quotation and Trading Server
1
2 . . .
n
345
Trading Client
Client Machine
More Client Machines

Figure 5A

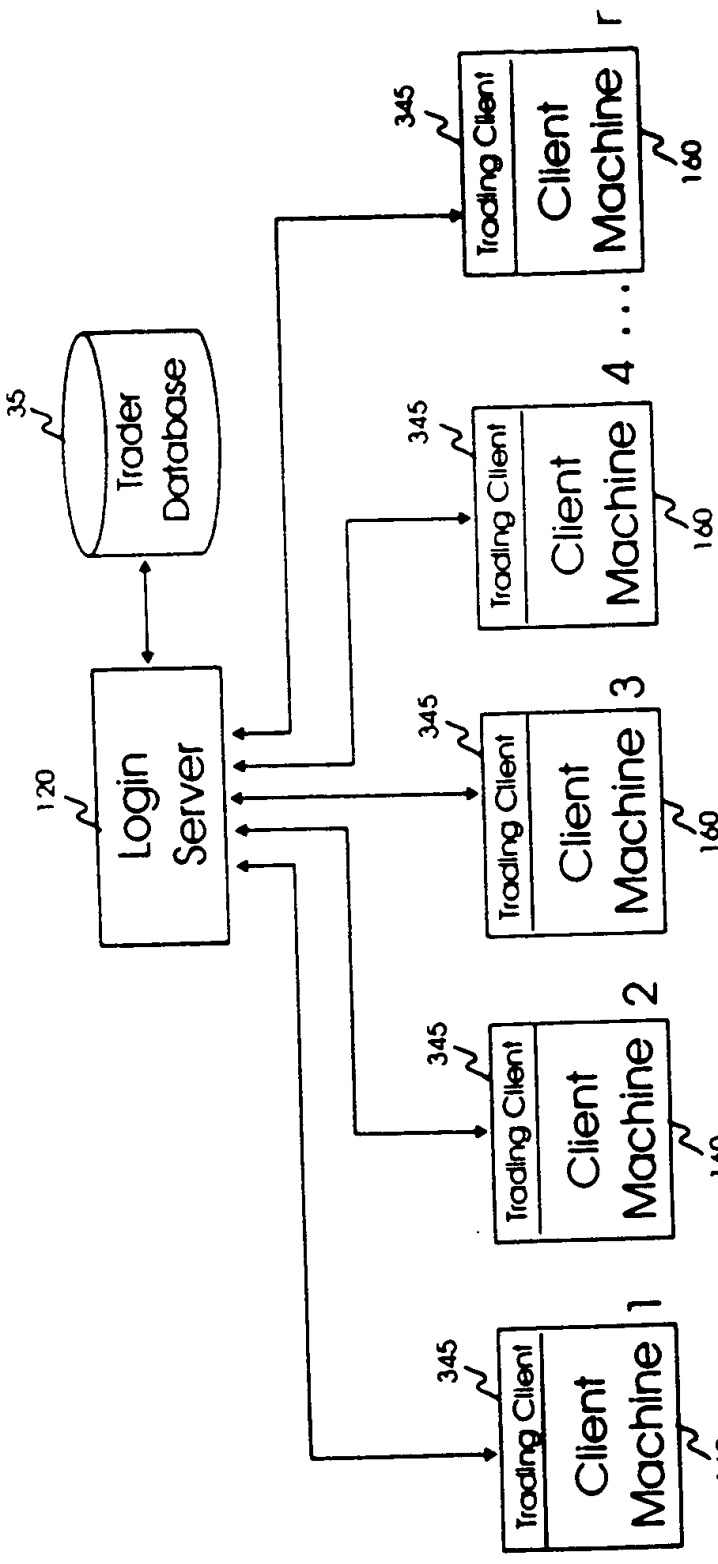
35
Trader Database
120
Login Server
345
Trading Client
Client Machine
160
1
2
3
4 . . .
r

Figure 5B

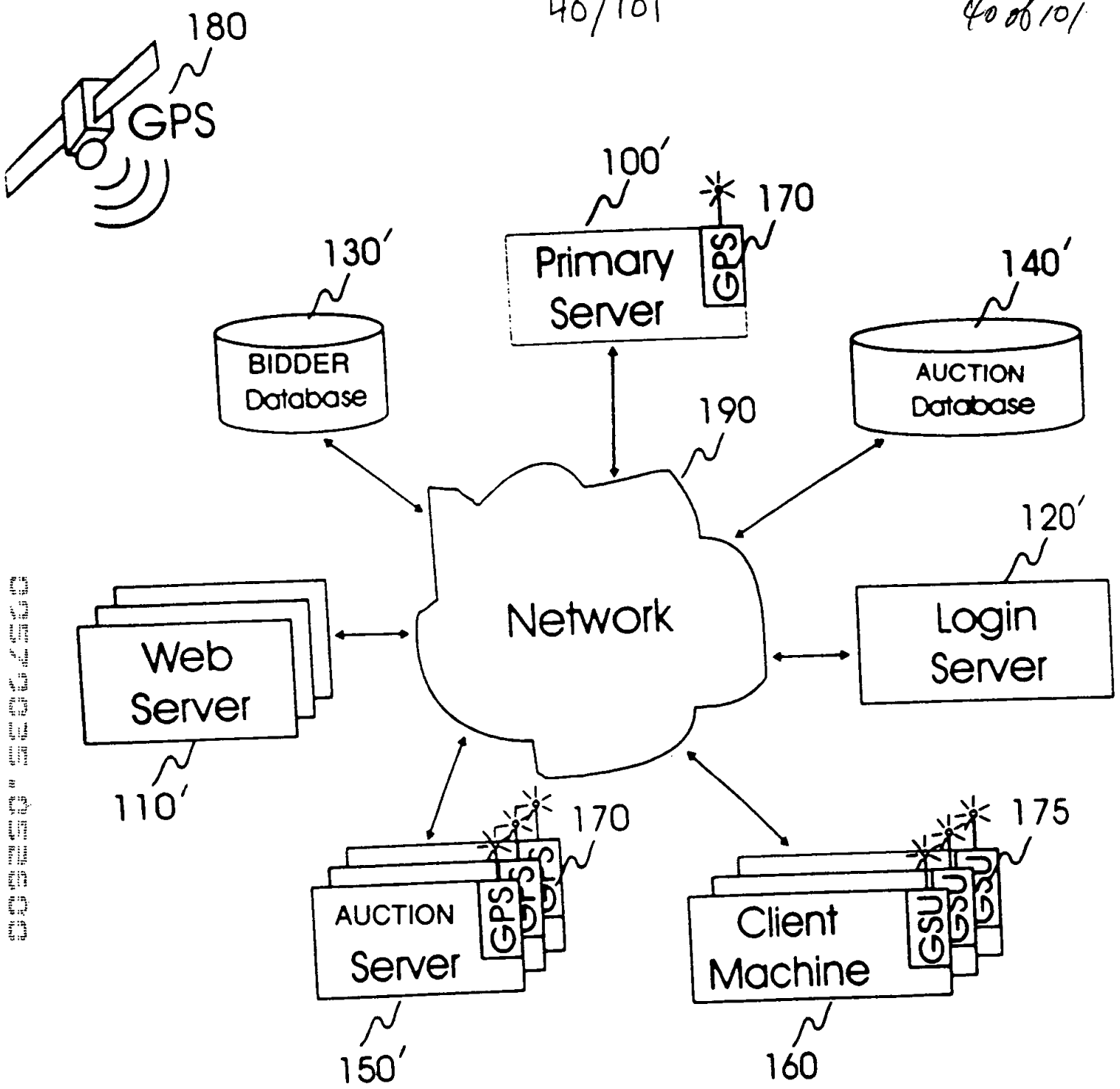
180
GPS
100'
170
Primary Server
GPS
130'
BIDDER Database
140'
AUCTION Database
190
120'
Network
Login Server
Web Server
110'
170
AUCTION Server
GPS
150'
175
Client Machine
GSU
160

FIG. 6

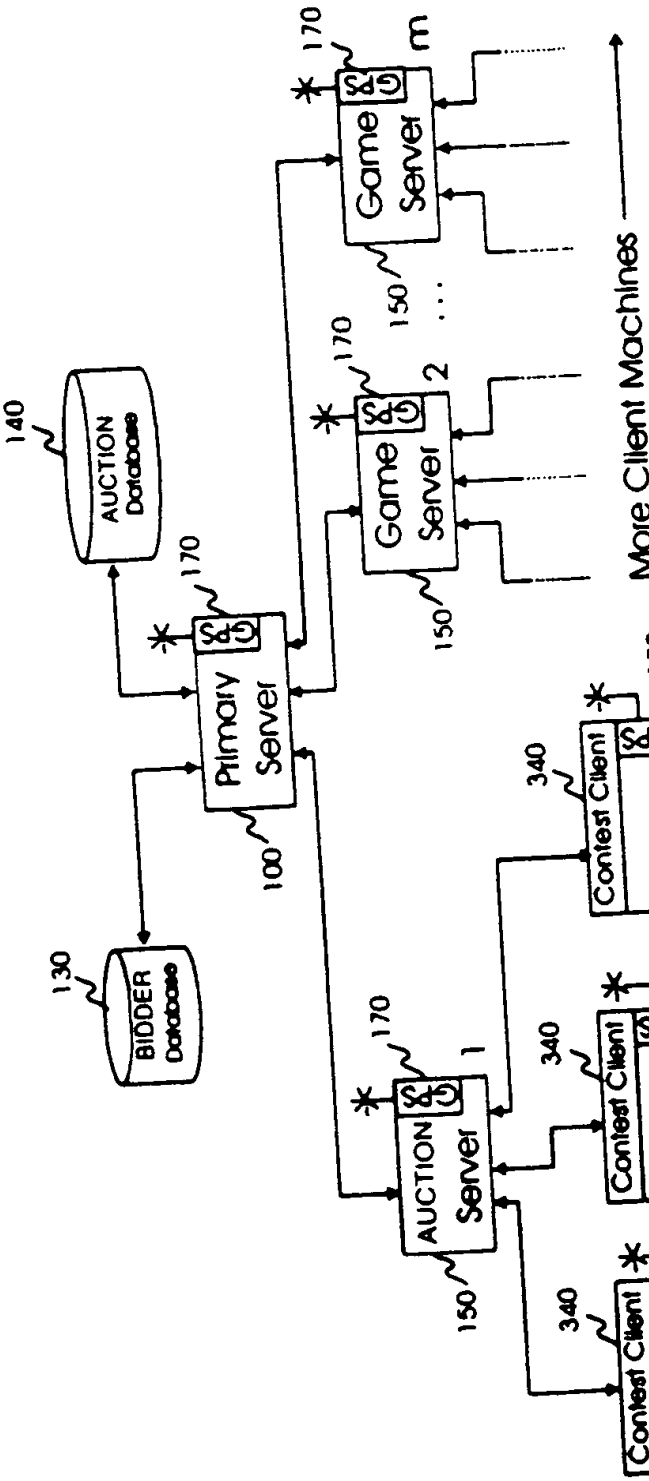
140
AUCTION Database
130
BIDDER Database
Primary Server
100
170
AUCTION Server
150
1
Game Server
150
2 ...
Game Server
150
m
More Client Machines
340
Contest Client
Client Machine
160
1
2 ...
n

FIG. 6A

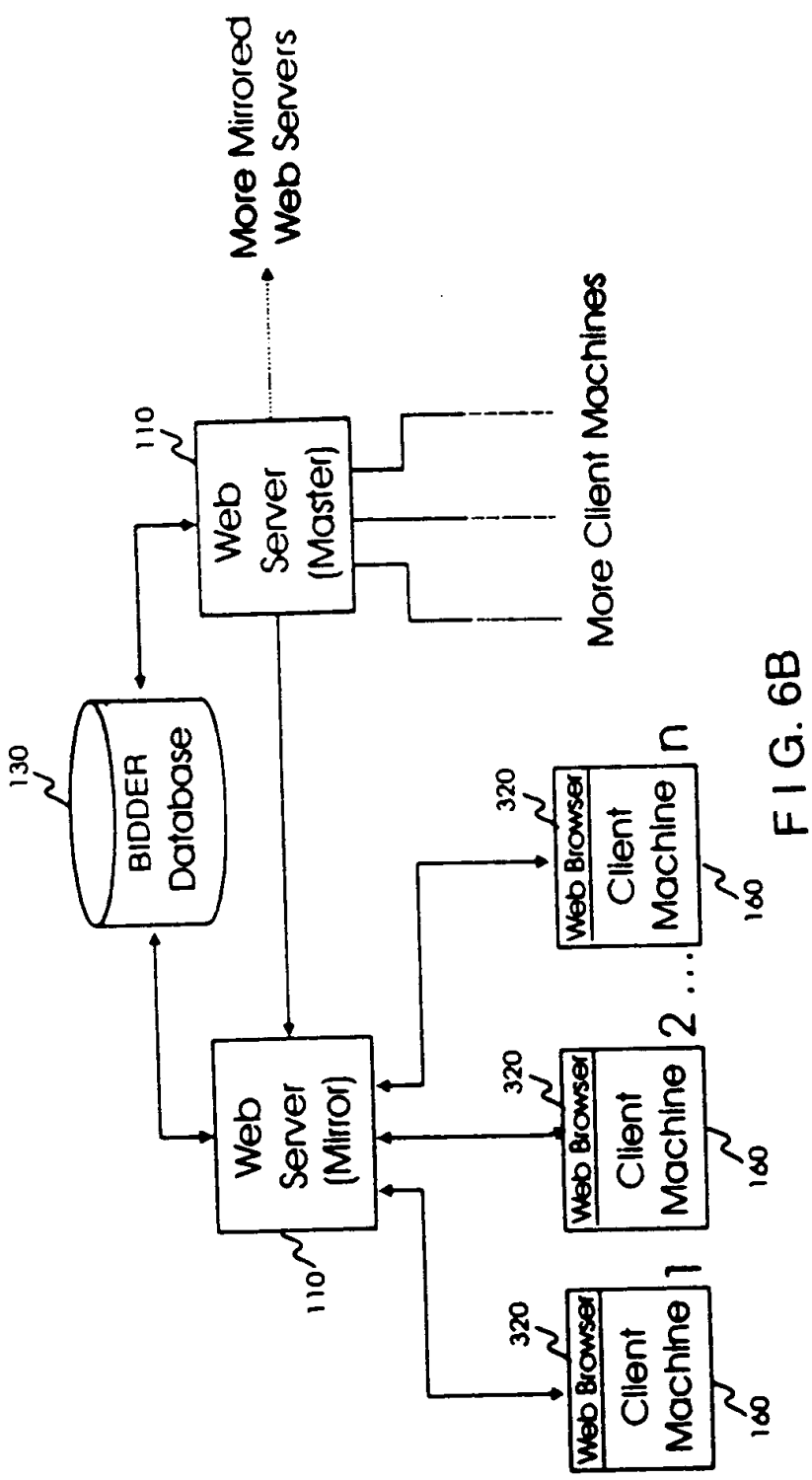
More Mirrored Web Servers
110
Web Server (Master)
More Client Machines
130
BIDDER Database
320
Web Browser
Client Machine
n
160
2 . . .
320
Web Browser
Client Machine
160
110
Web Server (Mirror)
320
Web Browser
Client Machine
1
160

FIG. 6B

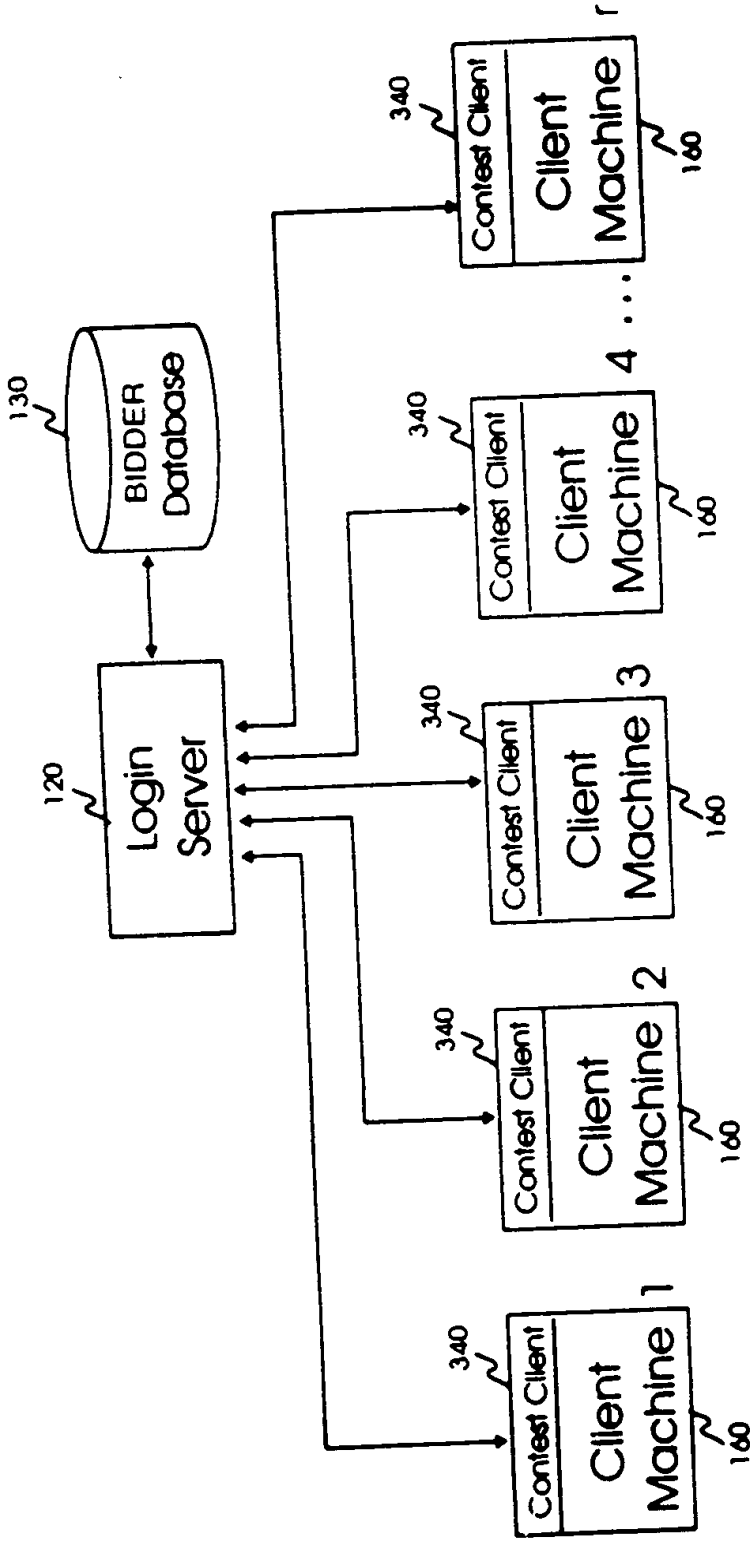
130
BIDDER Database
120
Login Server
340
Contest Client
Client Machine
160
1
2
3
4 . . .
n

FIG. 6C

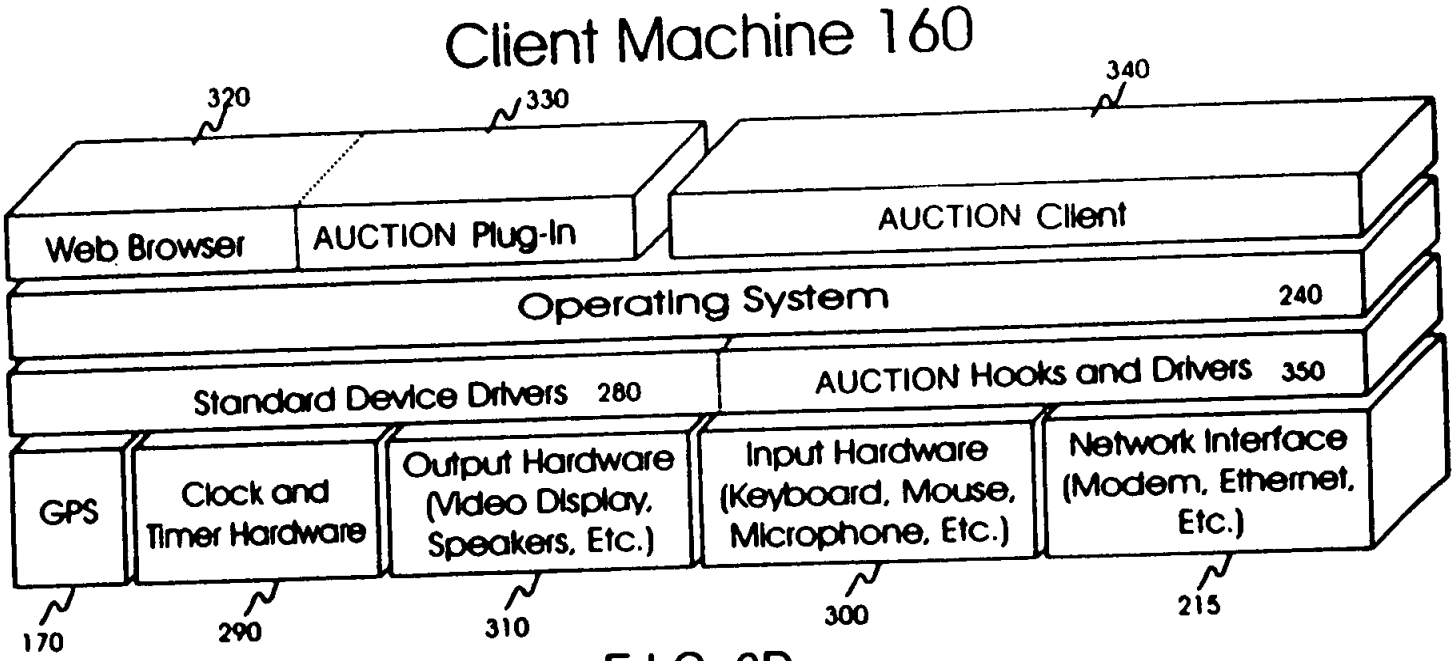
Client Machine 160
320
330
340
Web Browser
AUCTION Plug-In
AUCTION Client
Operating System
240
Standard Device Drivers 280
AUCTION Hooks and Drivers 350
GPS
Clock and Timer Hardware
Output Hardware (Video Display, Speakers, Etc.)
Input Hardware (Keyboard, Mouse, Microphone, Etc.)
Network Interface (Modem, Ethernet, Etc.)
170
290
310
300
215

FIG. 6D

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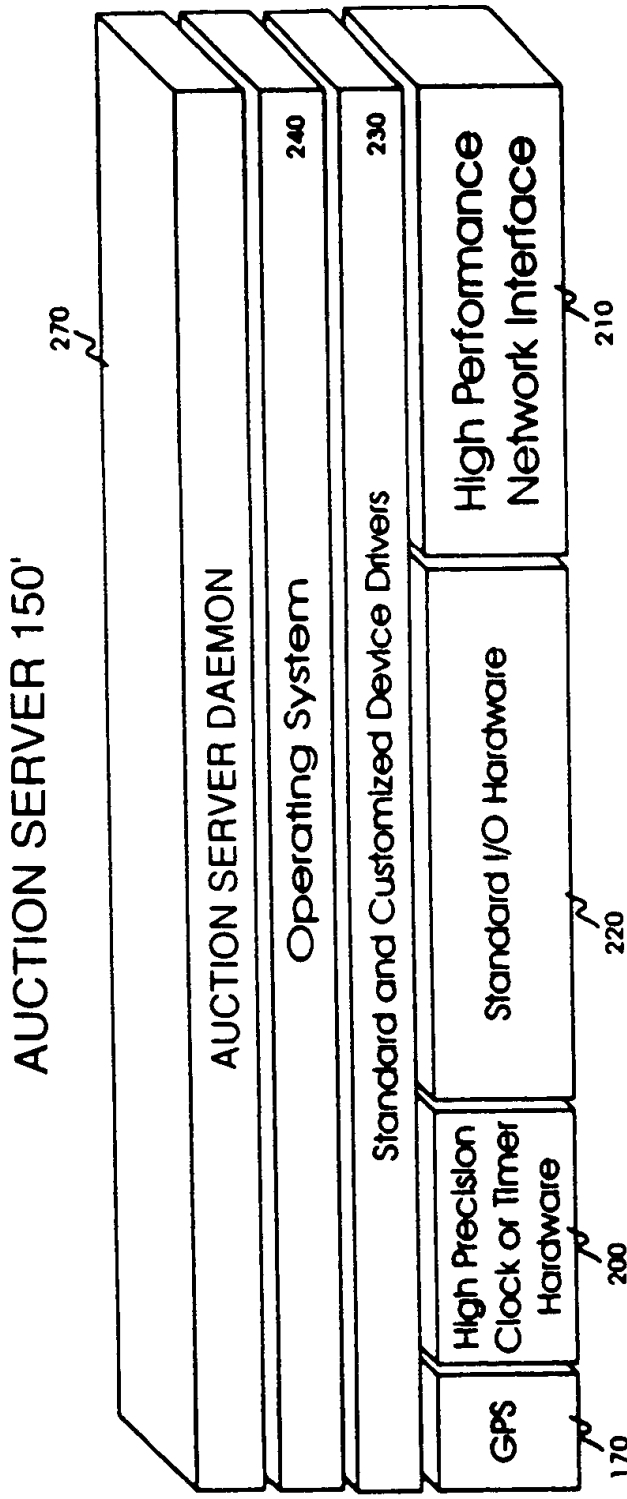
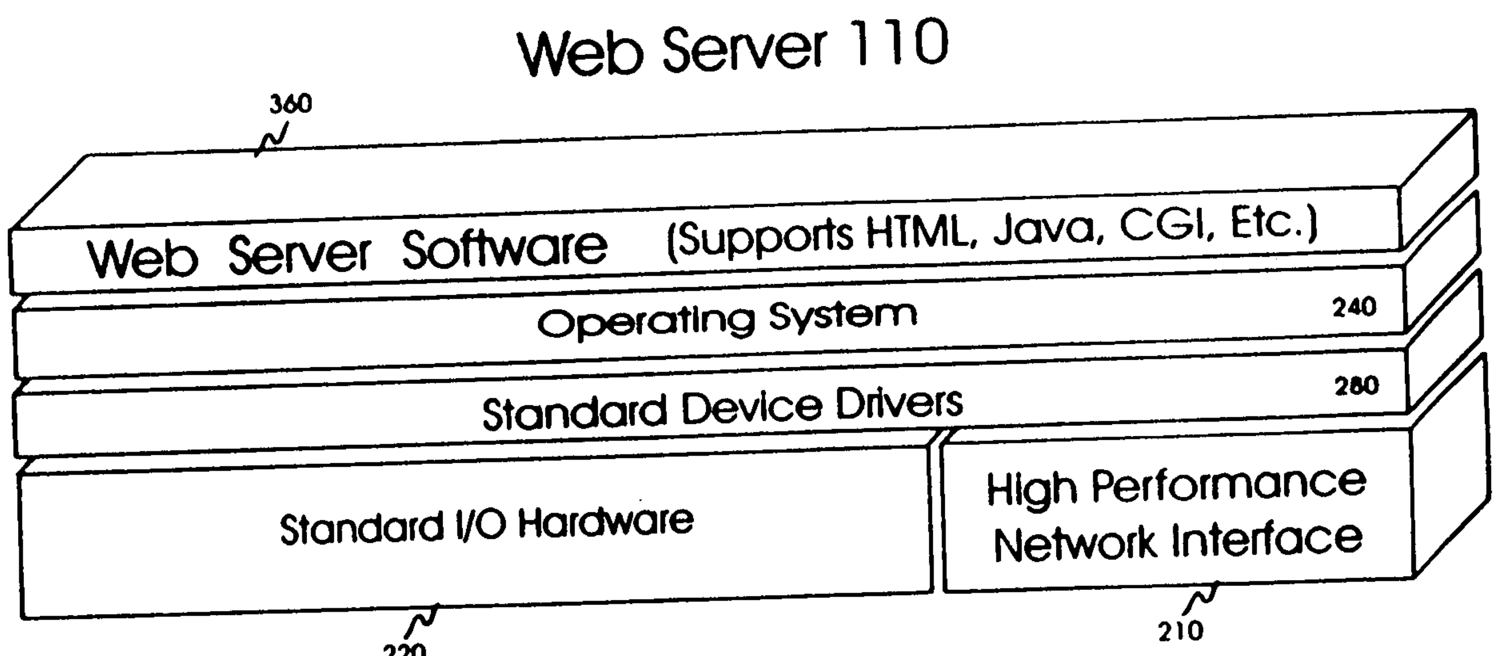


FIG. 6E


Web Server 110
360
Web Server Software (Supports HTML, Java, CGI, Etc.)
Operating System
240
Standard Device Drivers
280
Standard I/O Hardware
High Performance
Network Interface
220
210

F I G. 6F

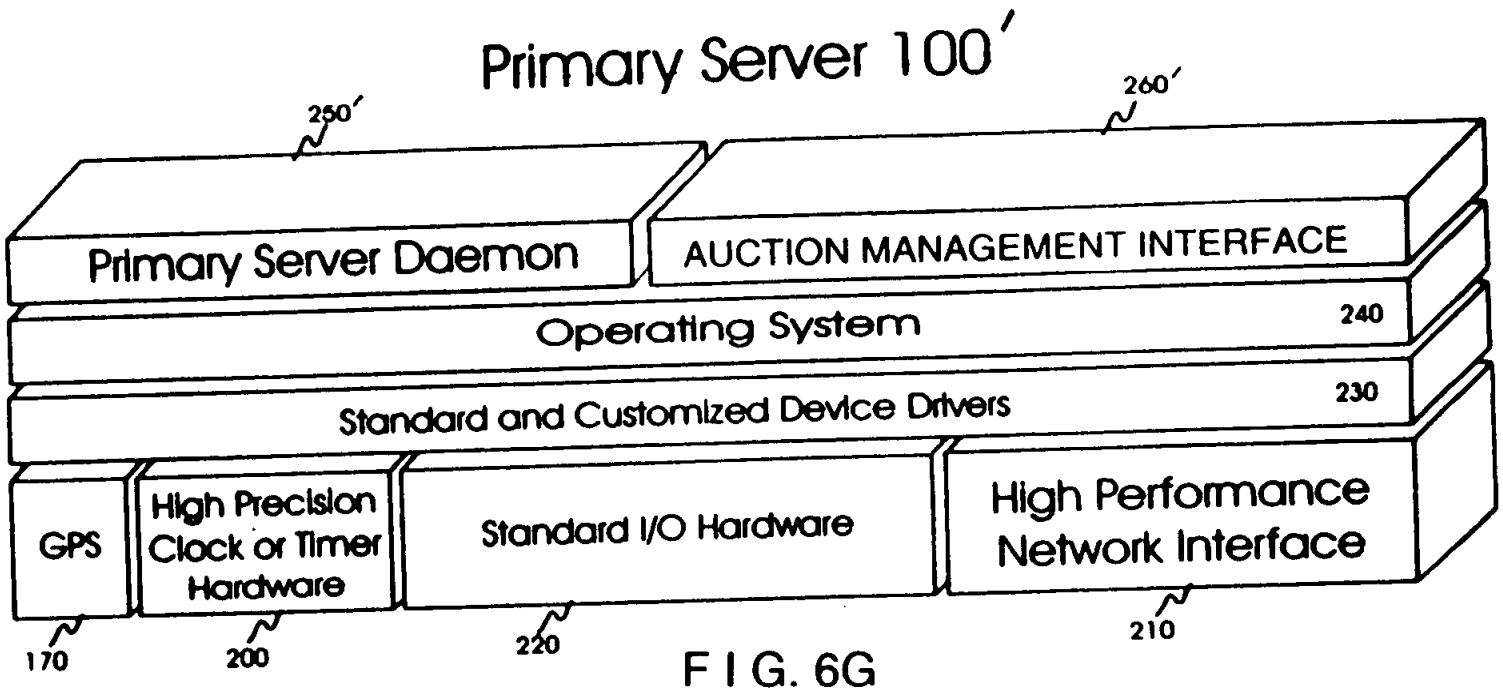

Primary Server 100'
250'
260'
Primary Server Daemon
AUCTION MANAGEMENT INTERFACE
Operating System
240
Standard and Customized Device Drivers
230
GPS
High Precision Clock or Timer Hardware
Standard I/O Hardware
High Performance Network Interface
170
200
220
210

FIG. 6G

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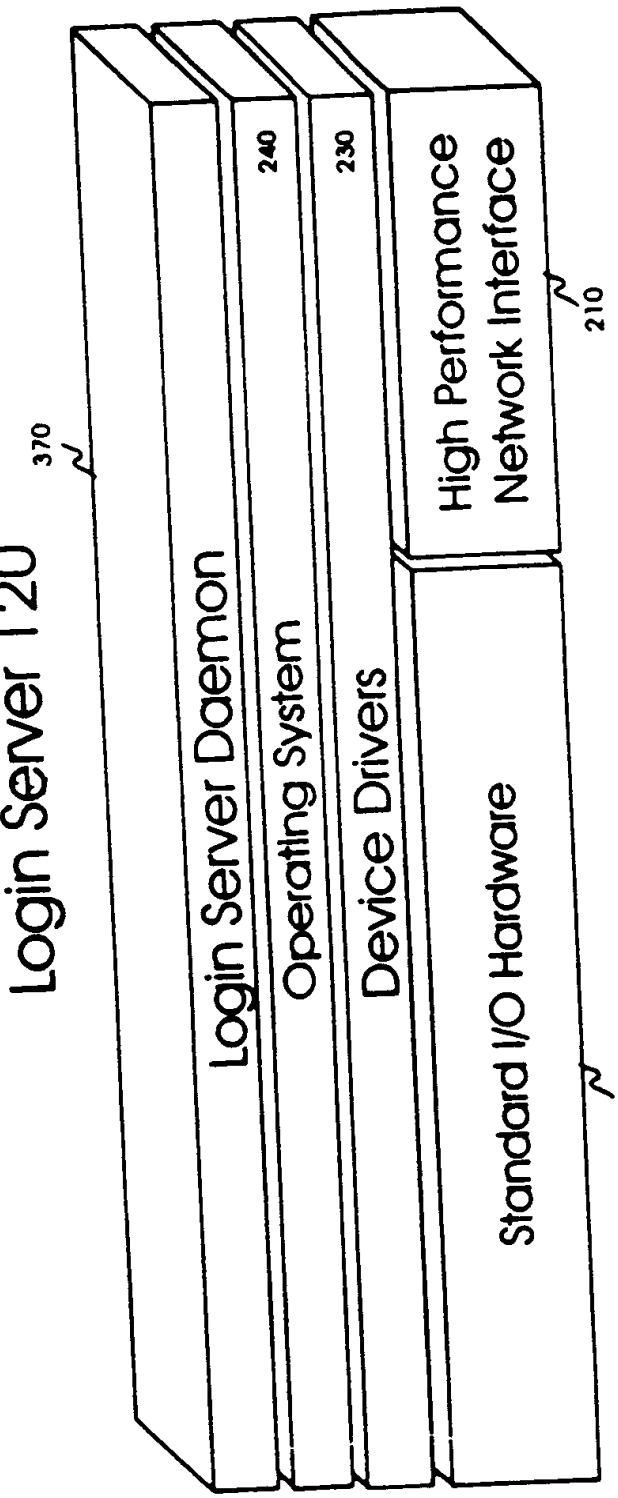
Login Server 120
370
Login Server Daemon
240
Operating System
230
Device Drivers
High Performance
Network Interface
210
Standard I/O Hardware
220

FIG. 6H

49/101

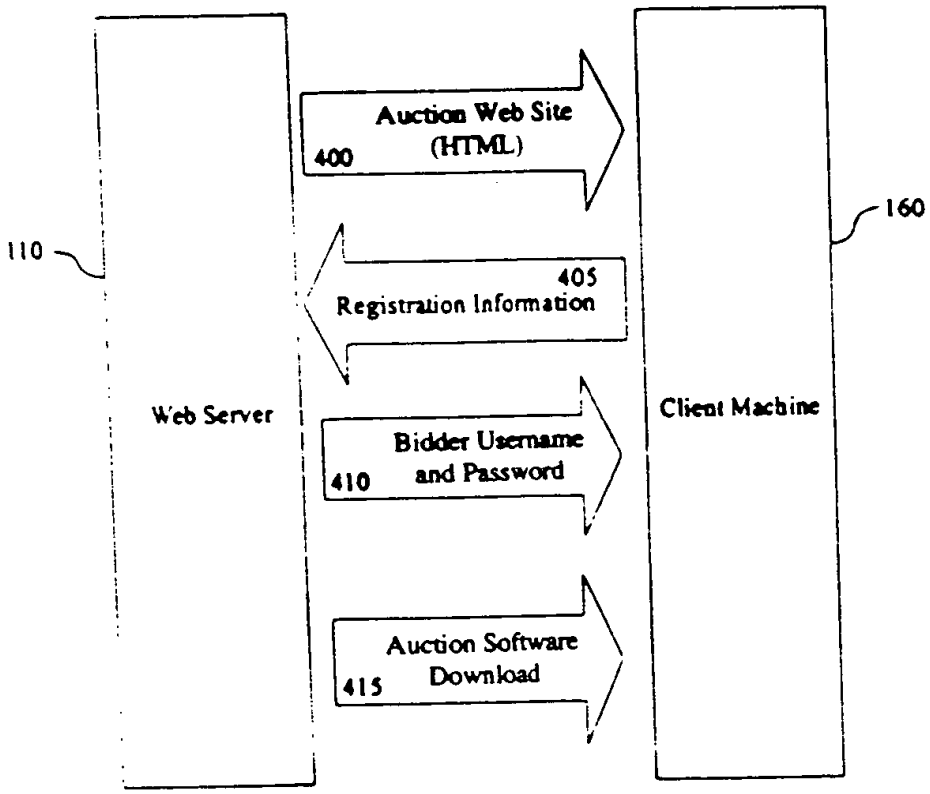
110
Web Server
Auction Web Site
(HTML)
400
405
Registration Information
Bidder Username
and Password
410
Auction Software
Download
415
Client Machine
160

FIG. 7A

50/101

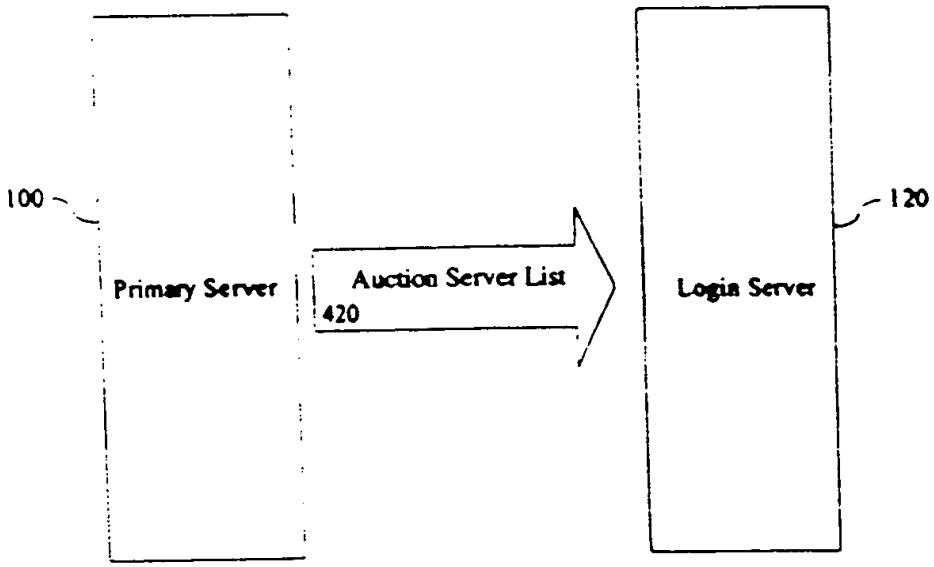
100
Primary Server
Auction Server List
420
Login Server
120

FIG. 7B

51/101

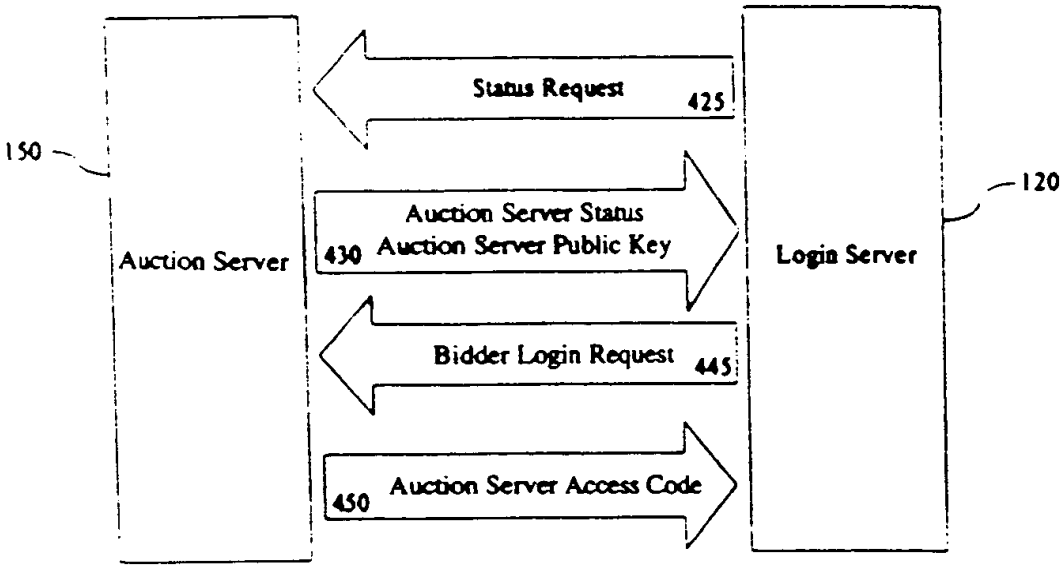
150
Auction Server
Status Request
425
Auction Server Status
430 Auction Server Public Key
Bidder Login Request
445
450 Auction Server Access Code
Login Server
120

FIG. 7C

52/101

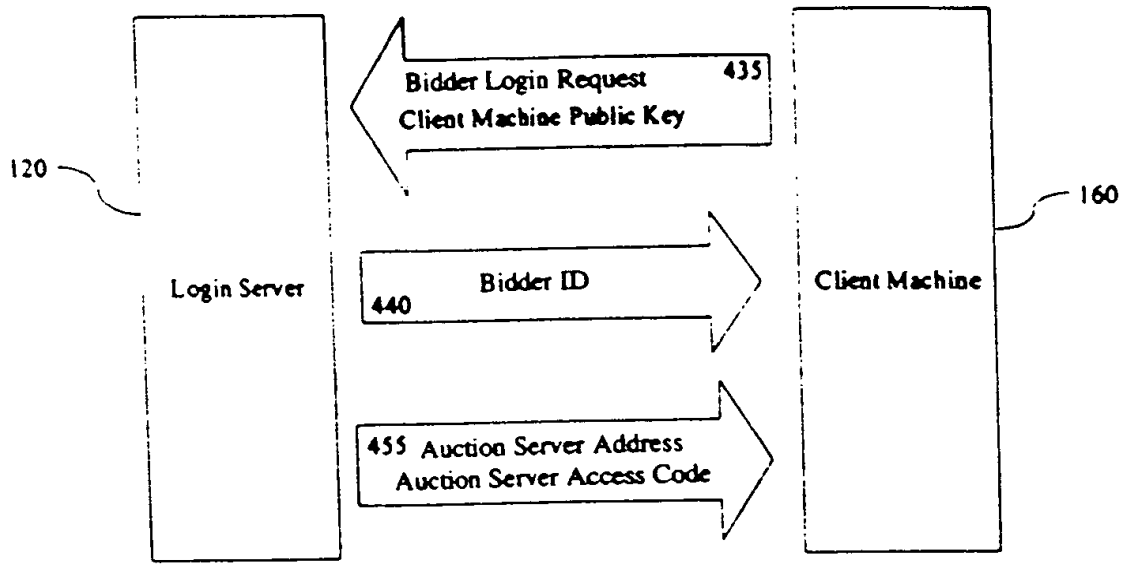
120
Login Server
Bidder Login Request
435
Client Machine Public Key
Bidder ID
440
455 Auction Server Address
Auction Server Access Code
Client Machine
160

FIG. 7D

53/101

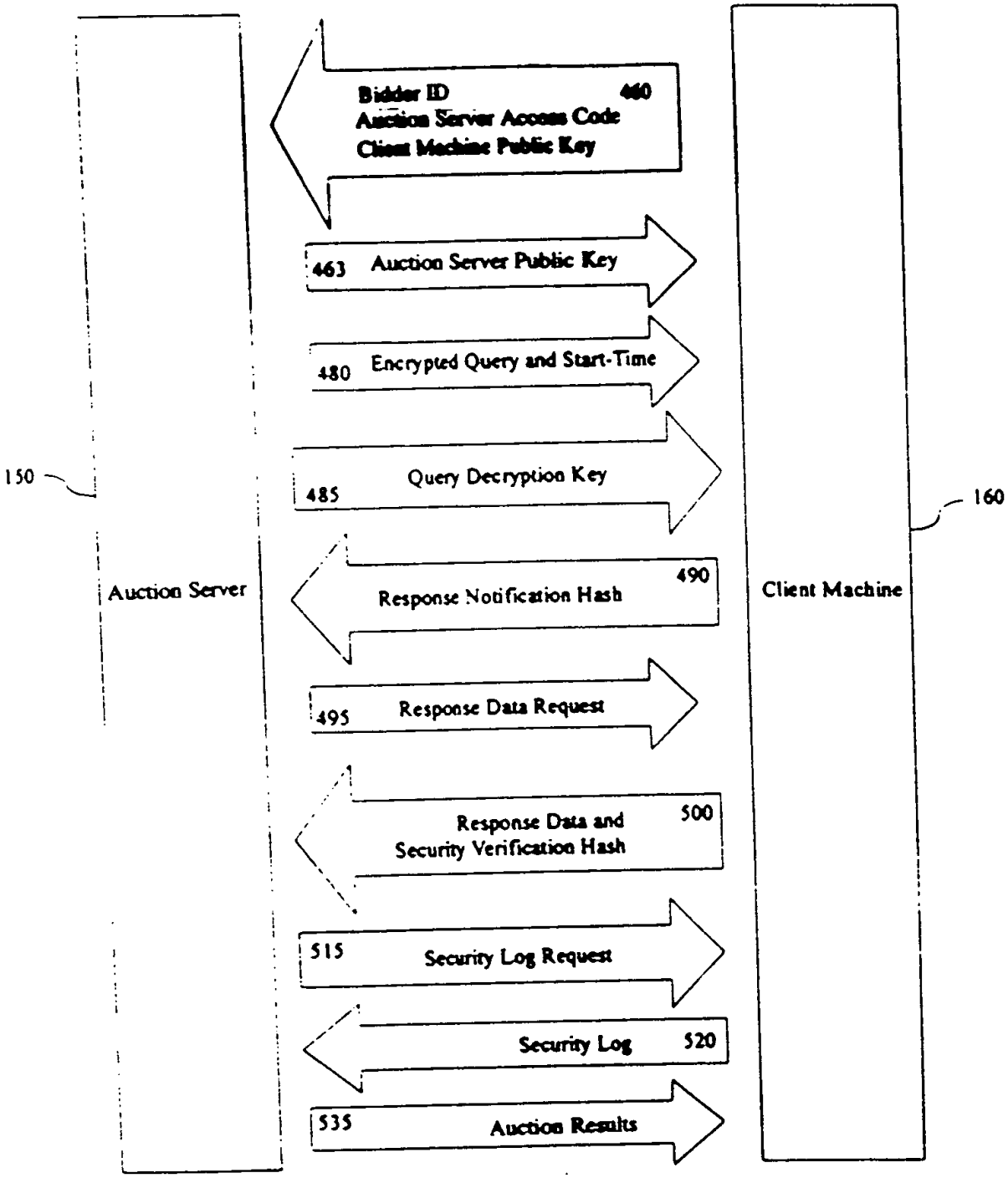
Bidder ID
Auction Server Access Code
Client Machine Public Key
460
463 Auction Server Public Key
480 Encrypted Query and Start-Time
485 Query Decryption Key
490 Response Notification Hash
495 Response Data Request
500 Response Data and Security Verification Hash
515 Security Log Request
520 Security Log
535 Auction Results
150
Auction Server
160
Client Machine

FIG. 7E

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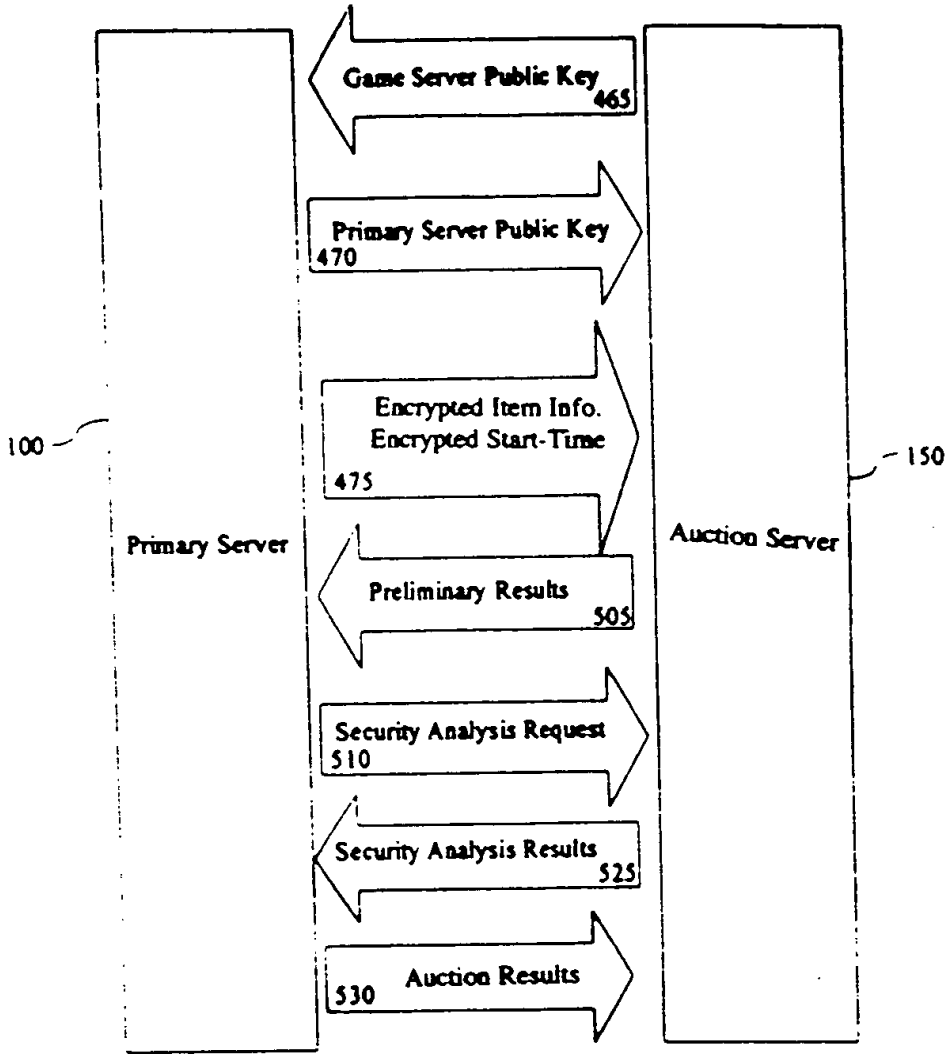

FIG. 7F

55/101

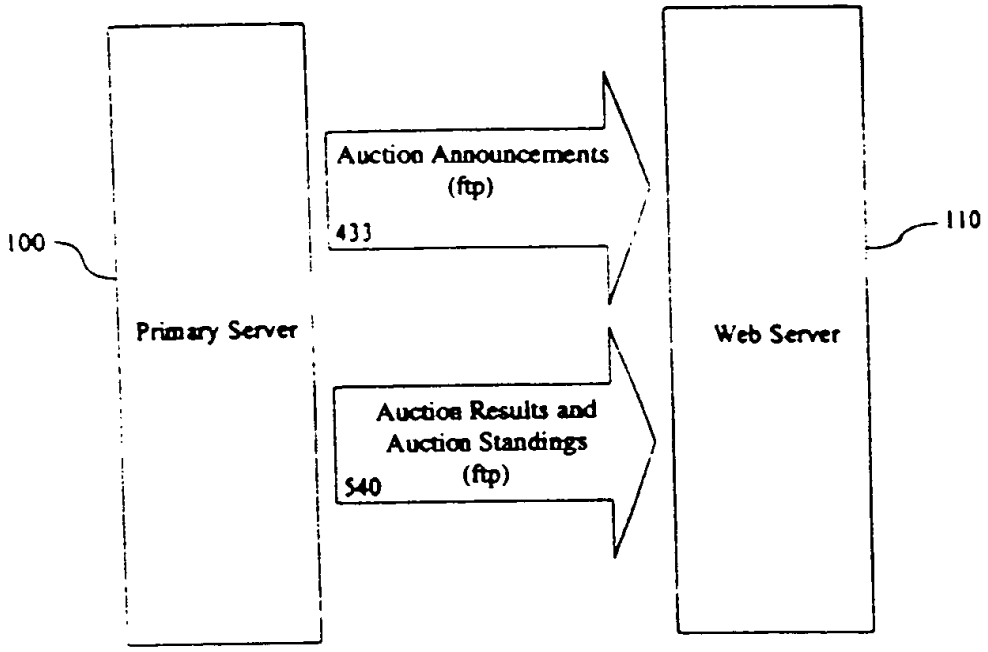
Auction Announcements
(ftp)
433
100
Primary Server
Web Server
110
Auction Results and
Auction Standings
(ftp)
540

FIG. 7G

LOGIN INFORMATION DATA FIELDS

USERNAME
PASSWORD
NAME
ADDRESS
EMAIL
CREDIT CARDS
CREDIT INFORMATION/RATING
UNIQUE IDENTIFICATION
NETWORK LATENCY HISTORY

FIG. 8A

BID HISTORY
AUCTION INFORMATION DATA FIELDS

ITEM NUMBER
DESCRIPTION
CATEGORY
MINIMUM SALE AMOUNT
BID INCREMENTS
START TIME
END TIME (IF APPLICABLE)
HIGHEST BID
ALL BID INFORMATION
OWNER
ADDRESS
EMAIL
PHONE
SALE HISTORY
BUYER COMMENTS

FIG. 8B

BID INFORMATION DATA FIELDS

USERNAME
UNIQUE IDENTIFICATION
SUBMISSION-TIME TIME STAMP
RECEIPT-TIME TIME STAMP
BID AMOUNT
VERIFICATION KEY

FIG. 8C

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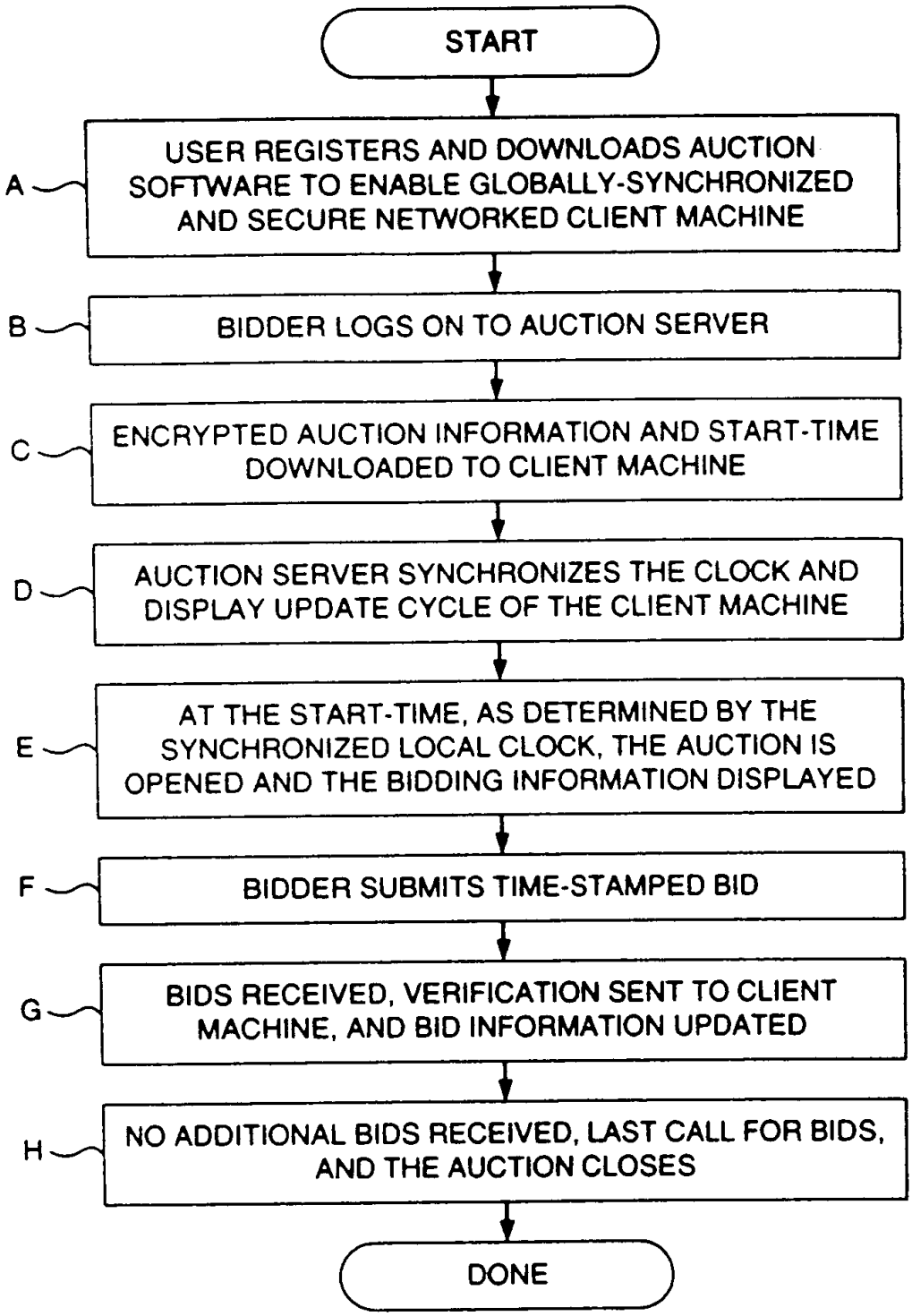
THE AUCTION PROCESS
START
A
USER REGISTERS AND DOWNLOADS AUCTION SOFTWARE TO ENABLE GLOBALLY-SYNCHRONIZED AND SECURE NETWORKED CLIENT MACHINE
B
BIDDER LOGS ON TO AUCTION SERVER
C
ENCRYPTED AUCTION INFORMATION AND START-TIME DOWNLOADED TO CLIENT MACHINE
D
AUCTION SERVER SYNCHRONIZES THE CLOCK AND DISPLAY UPDATE CYCLE OF THE CLIENT MACHINE
E
AT THE START-TIME, AS DETERMINED BY THE SYNCHRONIZED LOCAL CLOCK, THE AUCTION IS OPENED AND THE BIDDING INFORMATION DISPLAYED
F
BIDDER SUBMITS TIME-STAMPED BID
G
BIDS RECEIVED, VERIFICATION SENT TO CLIENT MACHINE, AND BID INFORMATION UPDATED
H
NO ADDITIONAL BIDS RECEIVED, LAST CALL FOR BIDS, AND THE AUCTION CLOSES
DONE

FIG. 9

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USER REGISTERS AND DOWNLOADS AUCTION SOFTWARE

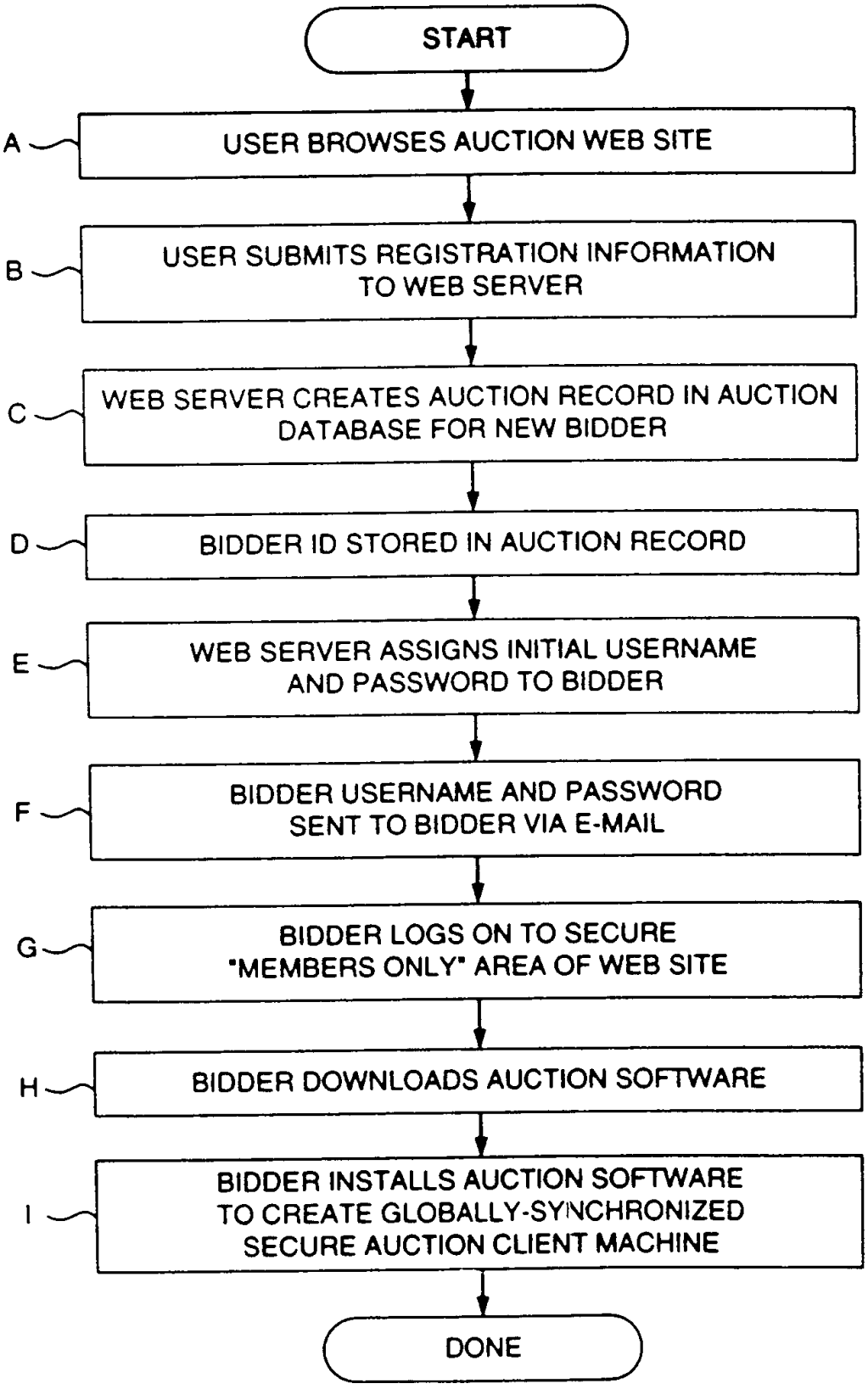

FIG. 9A

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BIDDER LOGS ON TO AUCTION SERVER

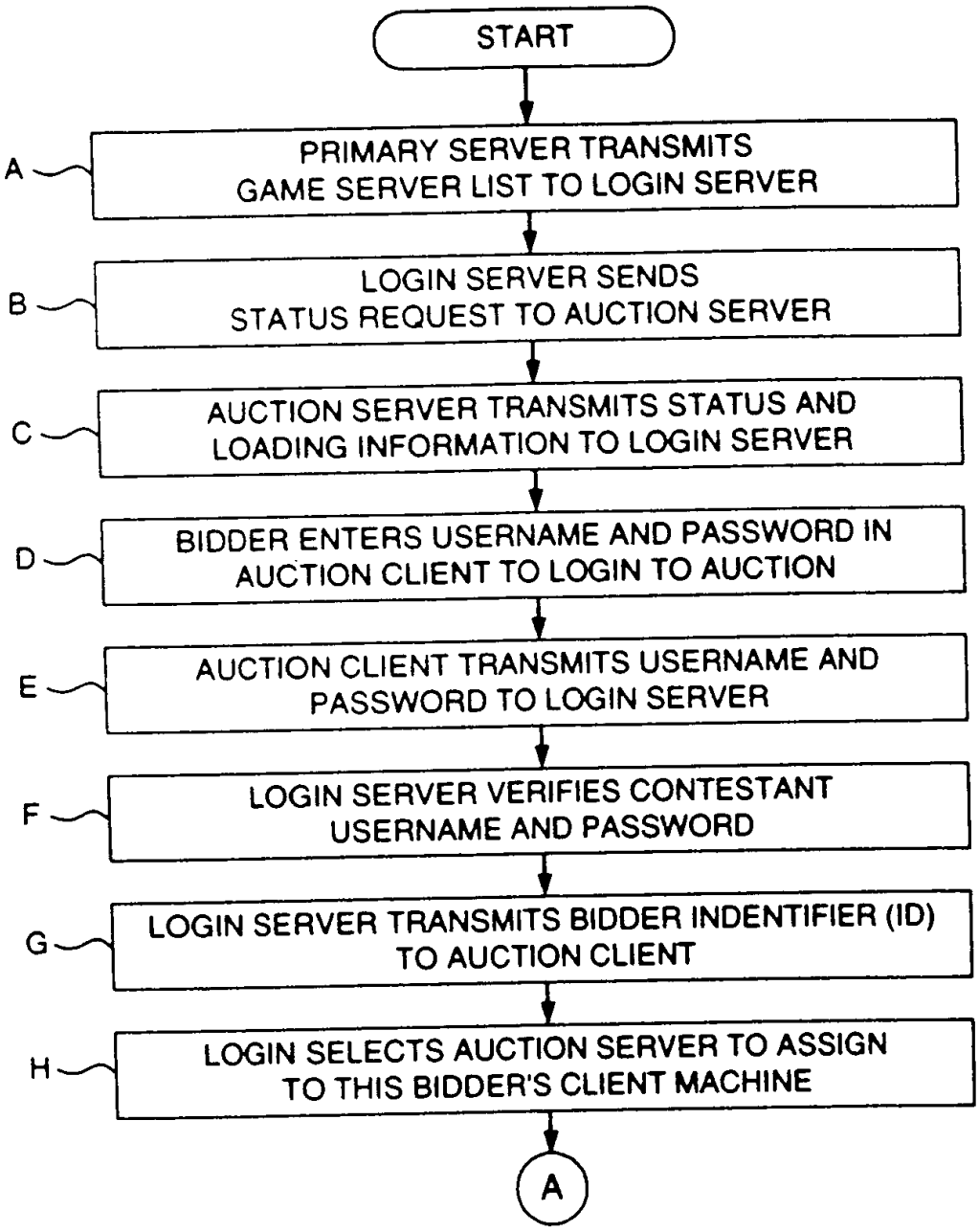

FIG. 9B1

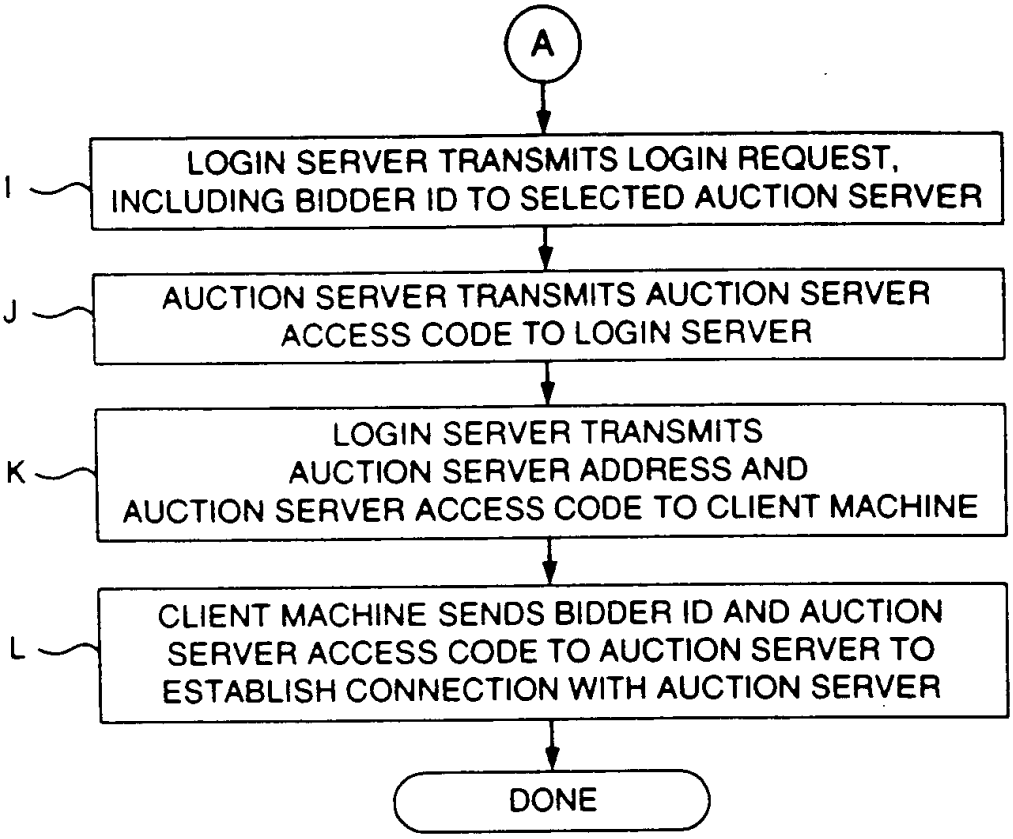
A
I
LOGIN SERVER TRANSMITS LOGIN REQUEST, INCLUDING BIDDER ID TO SELECTED AUCTION SERVER
J
AUCTION SERVER TRANSMITS AUCTION SERVER ACCESS CODE TO LOGIN SERVER
K
LOGIN SERVER TRANSMITS AUCTION SERVER ADDRESS AND AUCTION SERVER ACCESS CODE TO CLIENT MACHINE
L
CLIENT MACHINE SENDS BIDDER ID AND AUCTION SERVER ACCESS CODE TO AUCTION SERVER TO ESTABLISH CONNECTION WITH AUCTION SERVER
DONE

FIG. 9B2

ENCRYPTED AUCTION INFORMATION AND START-TIME DOWNLOADED TO CLIENT MACHINE

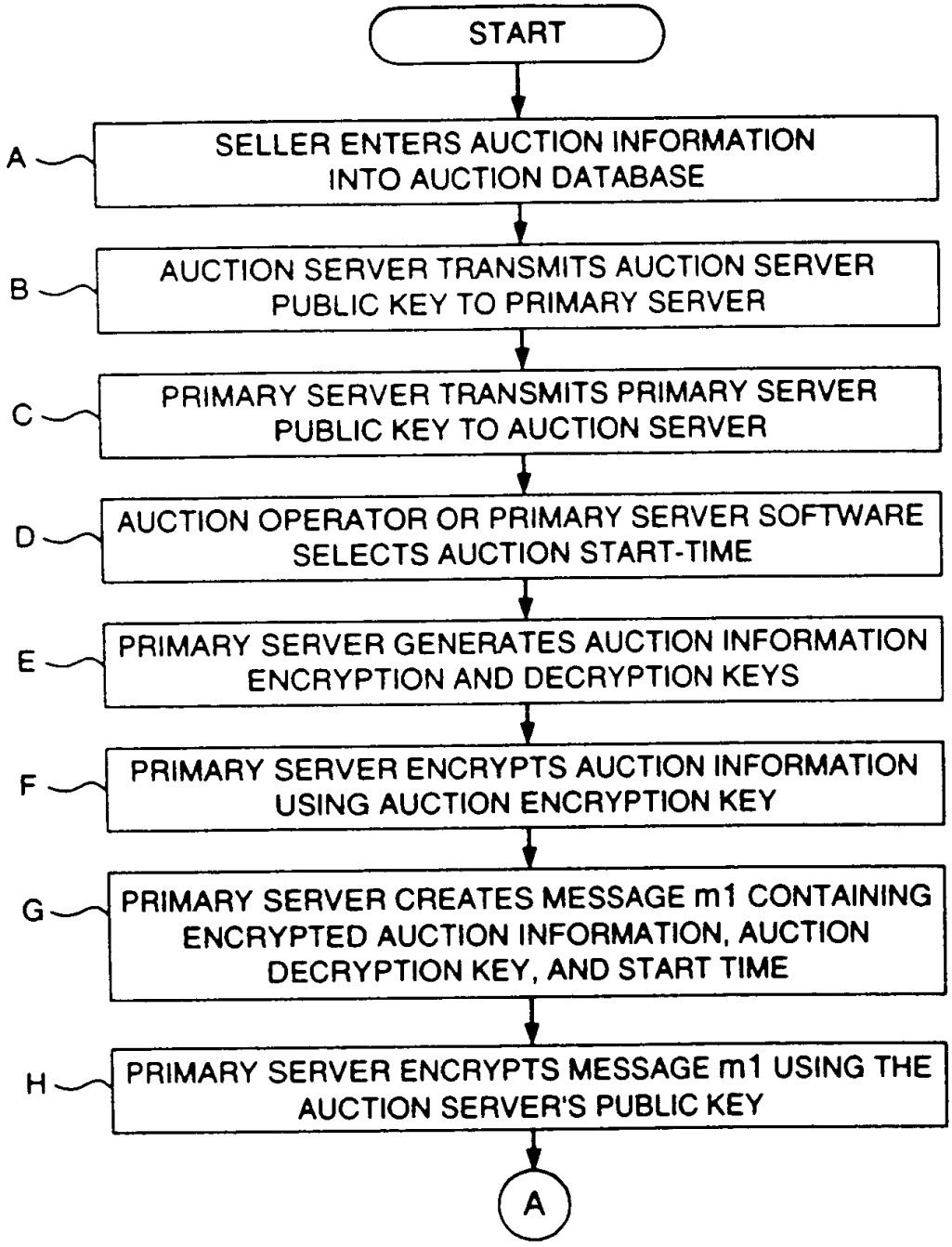

FIG. 9C1

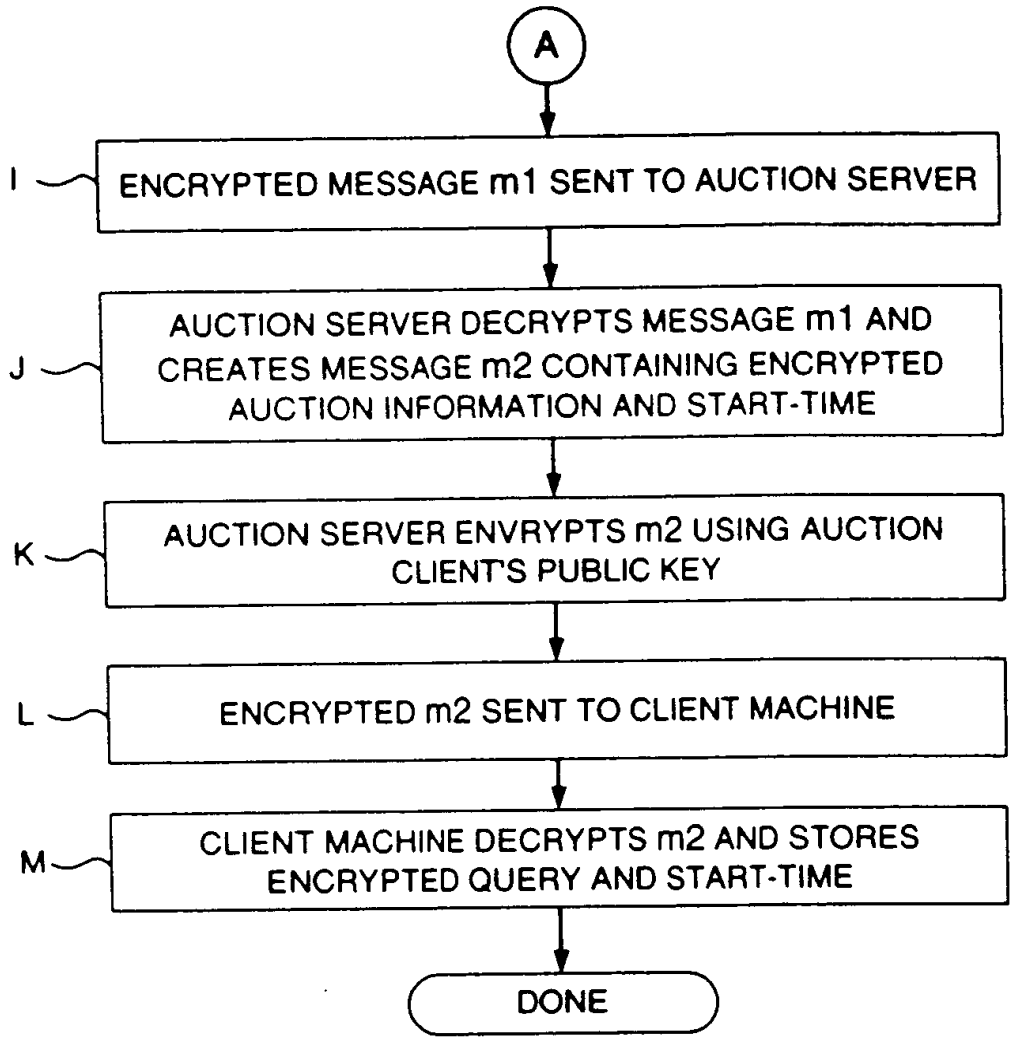
A
I
ENCRYPTED MESSAGE m1 SENT TO AUCTION SERVER
J
AUCTION SERVER DECRYPTS MESSAGE m1 AND CREATES MESSAGE m2 CONTAINING ENCRYPTED AUCTION INFORMATION AND START-TIME
K
AUCTION SERVER ENVRYPTS m2 USING AUCTION CLIENT'S PUBLIC KEY
L
ENCRYPTED m2 SENT TO CLIENT MACHINE
M
CLIENT MACHINE DECRYPTS m2 AND STORES ENCRYPTED QUERY AND START-TIME
DONE

FIG. 9C2

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AUCTION SERVER SYNCHRONIZES THE CLOCK AND DISPLAY UPDATE CYCLE OF THE CLIENT MACHINE

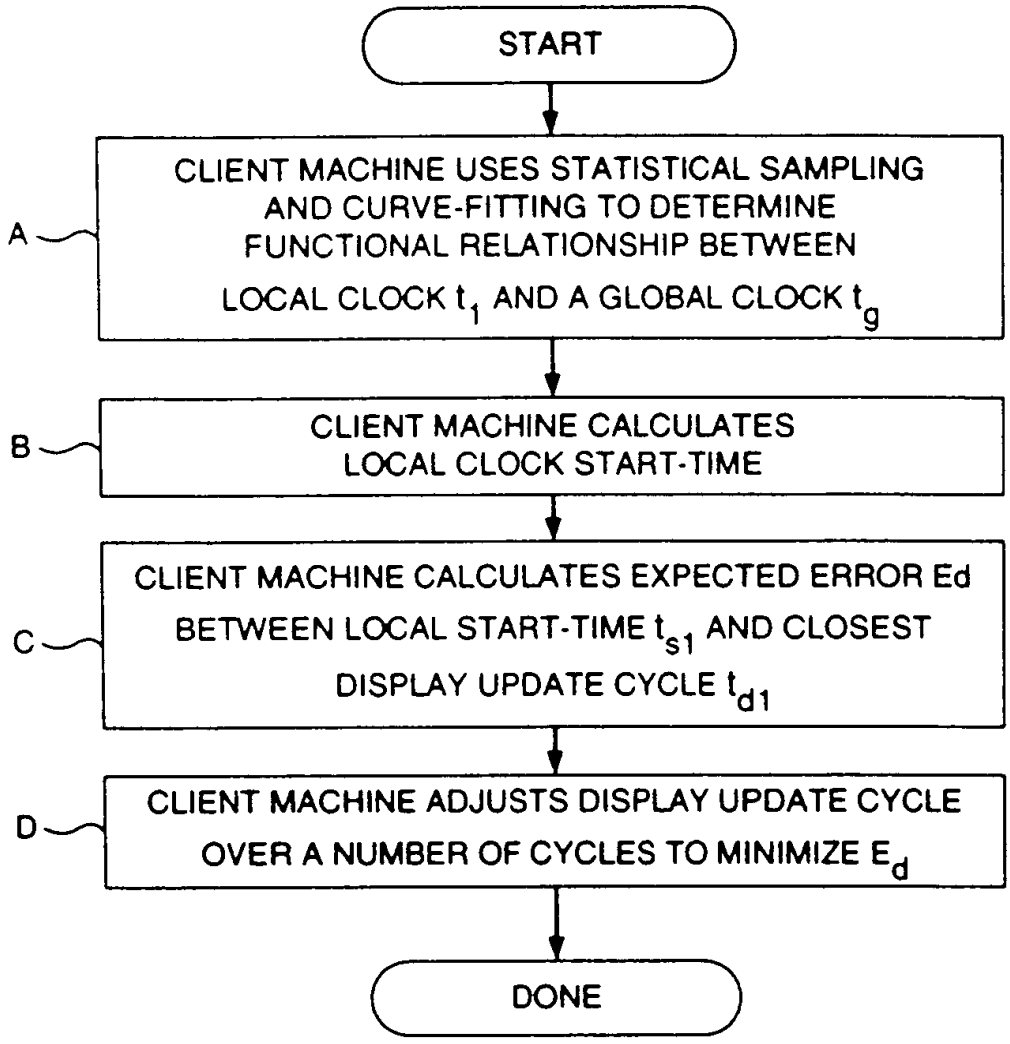

FIG. 9D

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HIGH LEVEL BIDDING PROCESS

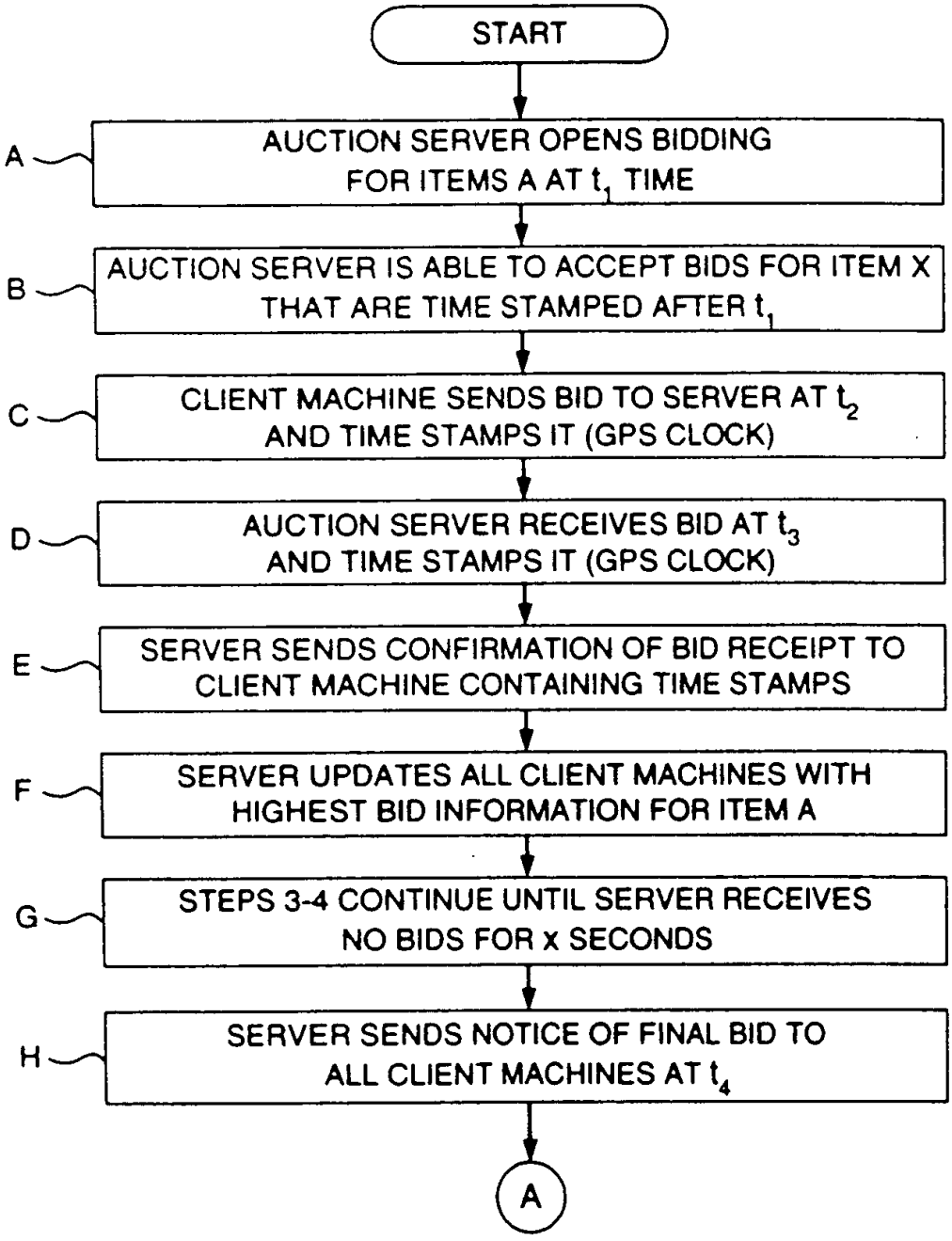

FIG. 9E1

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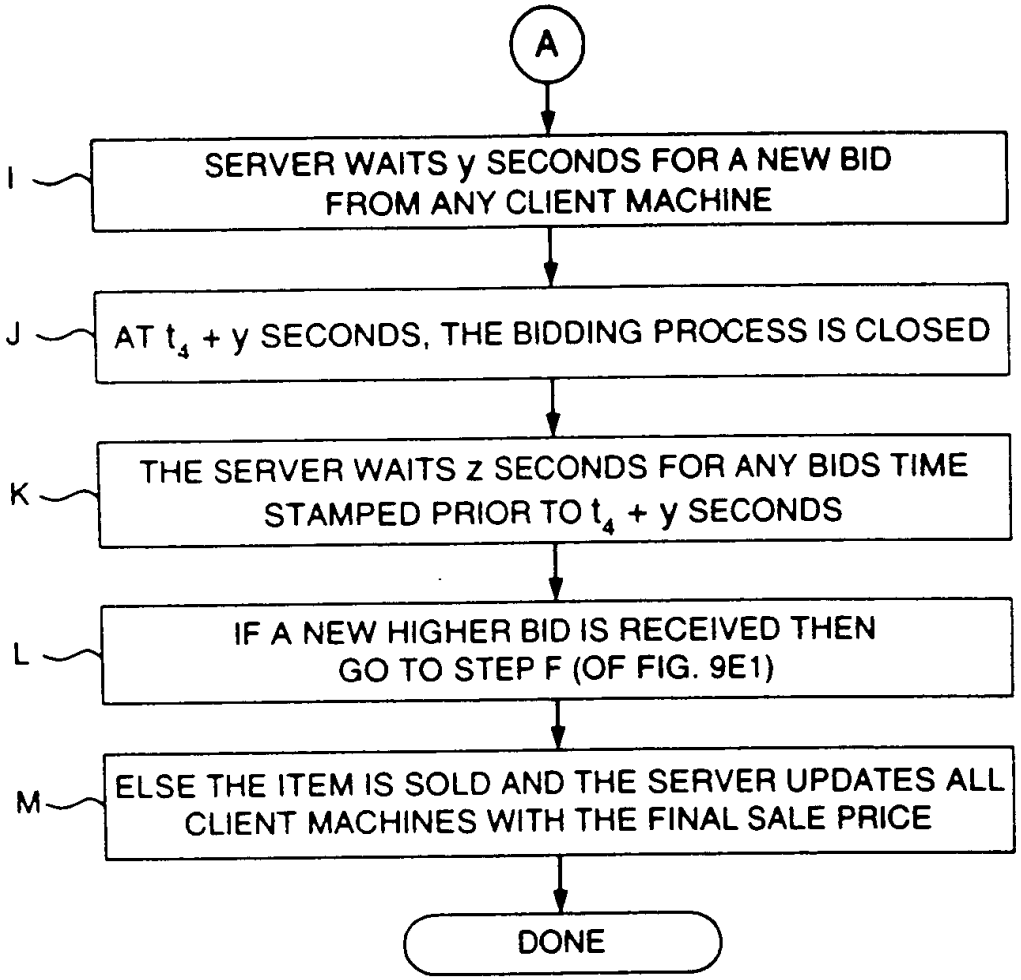


FIG. 9E2

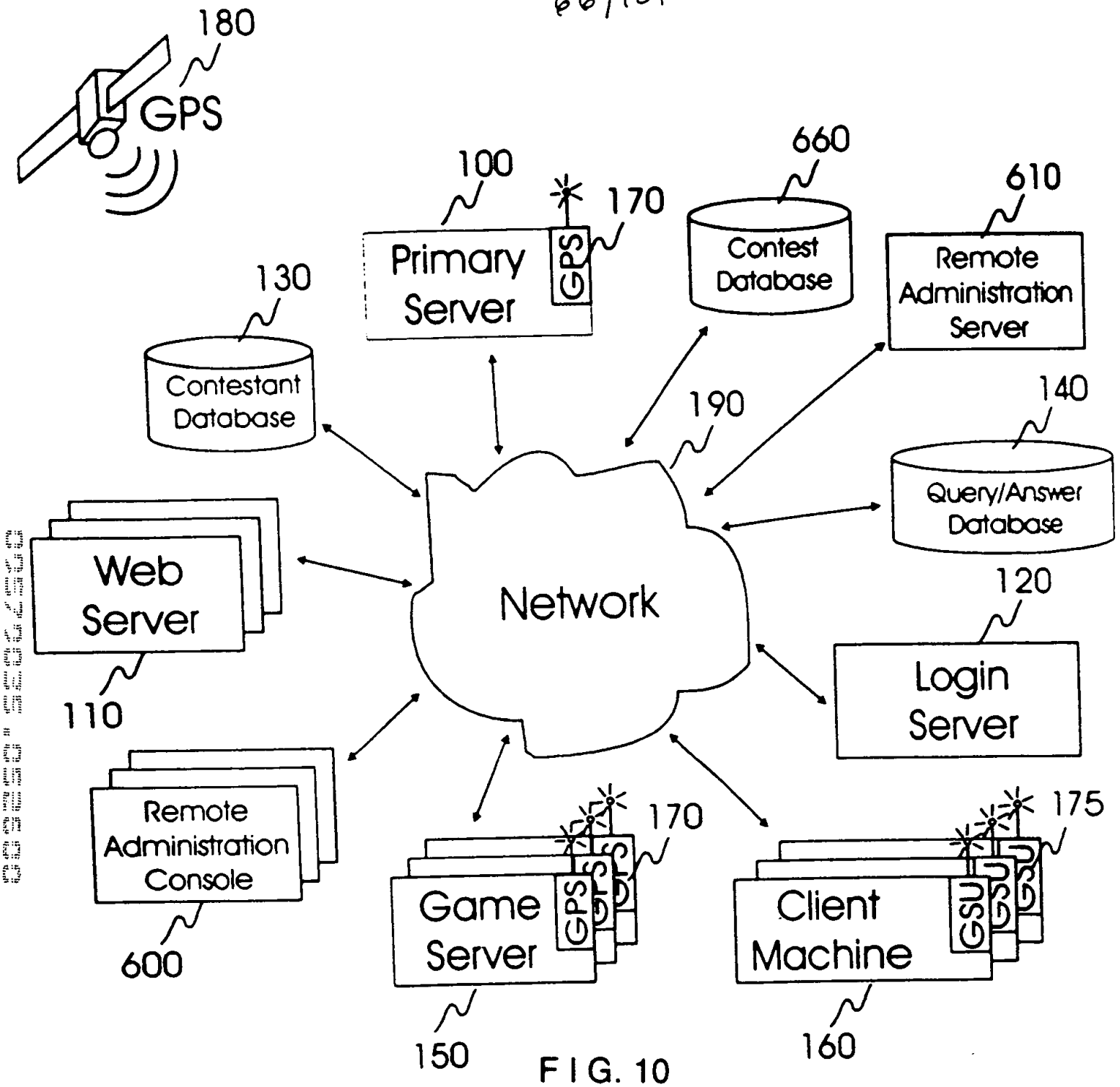

180
GPS
100
Primary Server
GPS
170
660
Contest Database
610
Remote Administration Server
130
Contestant Database
190
140
Query/Answer Database
Web Server
110
Network
120
Login Server
Remote Administration Console
600
Game Server
GPS
170
Client Machine
GSU
175
150
160

FIG. 10

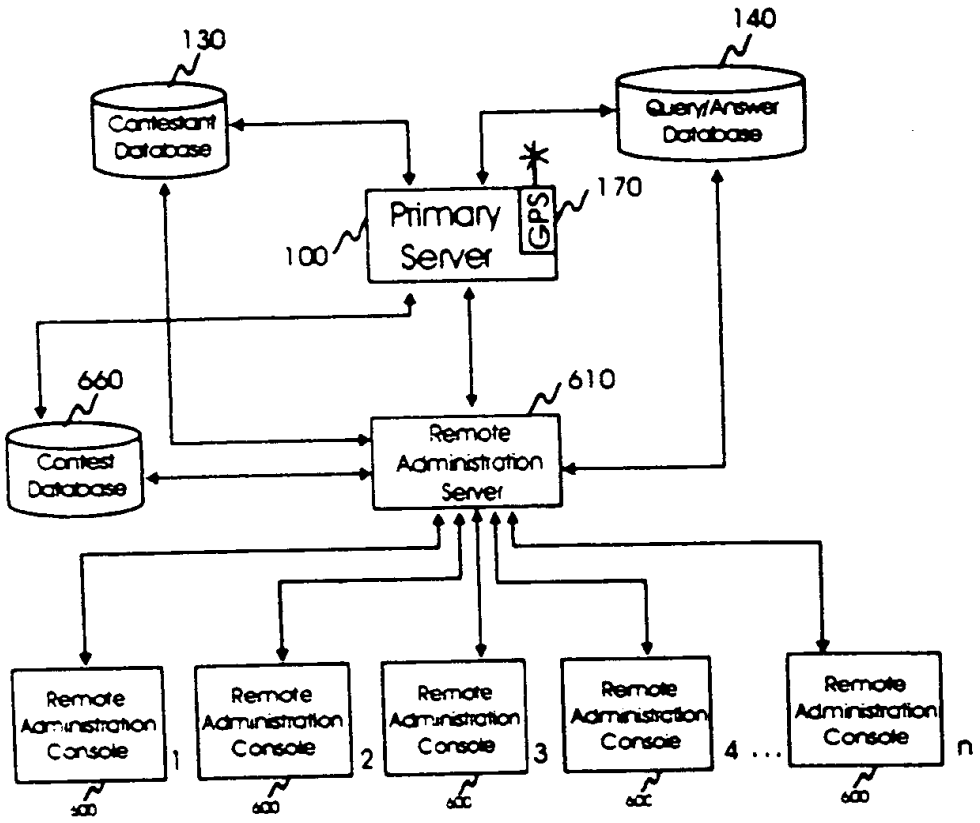

130
Contestant Database
140
Query/Answer Database
Primary Server
GPS
170
100
660
Contest Database
610
Remote Administration Server
Remote Administration Console
1
Remote Administration Console
2
Remote Administration Console
3
Remote Administration Console
4 ...
Remote Administration Console
n
600

FIG. 10A

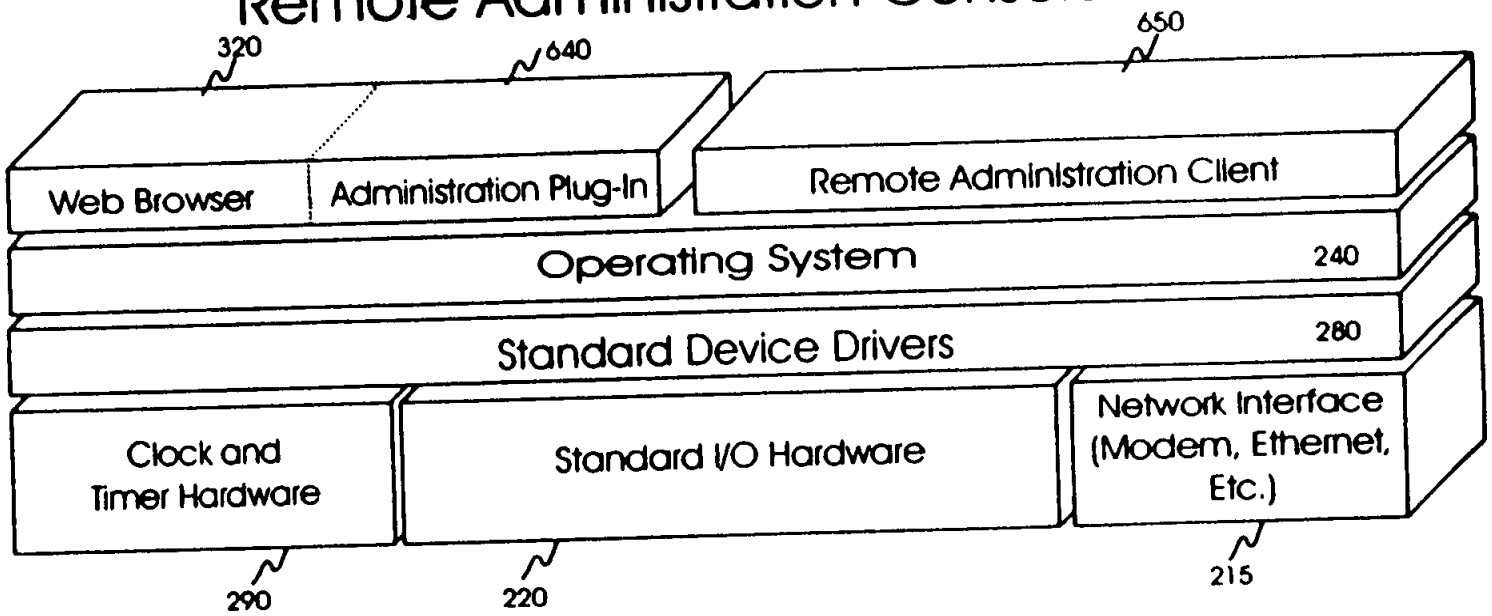

Remote Administration Console 600
320
640
650
Web Browser
Administration Plug-In
Remote Administration Client
Operating System
240
Standard Device Drivers
280
Clock and Timer Hardware
Standard I/O Hardware
Network Interface (Modem, Ethernet, Etc.)
290
220
215

FIG. 10B

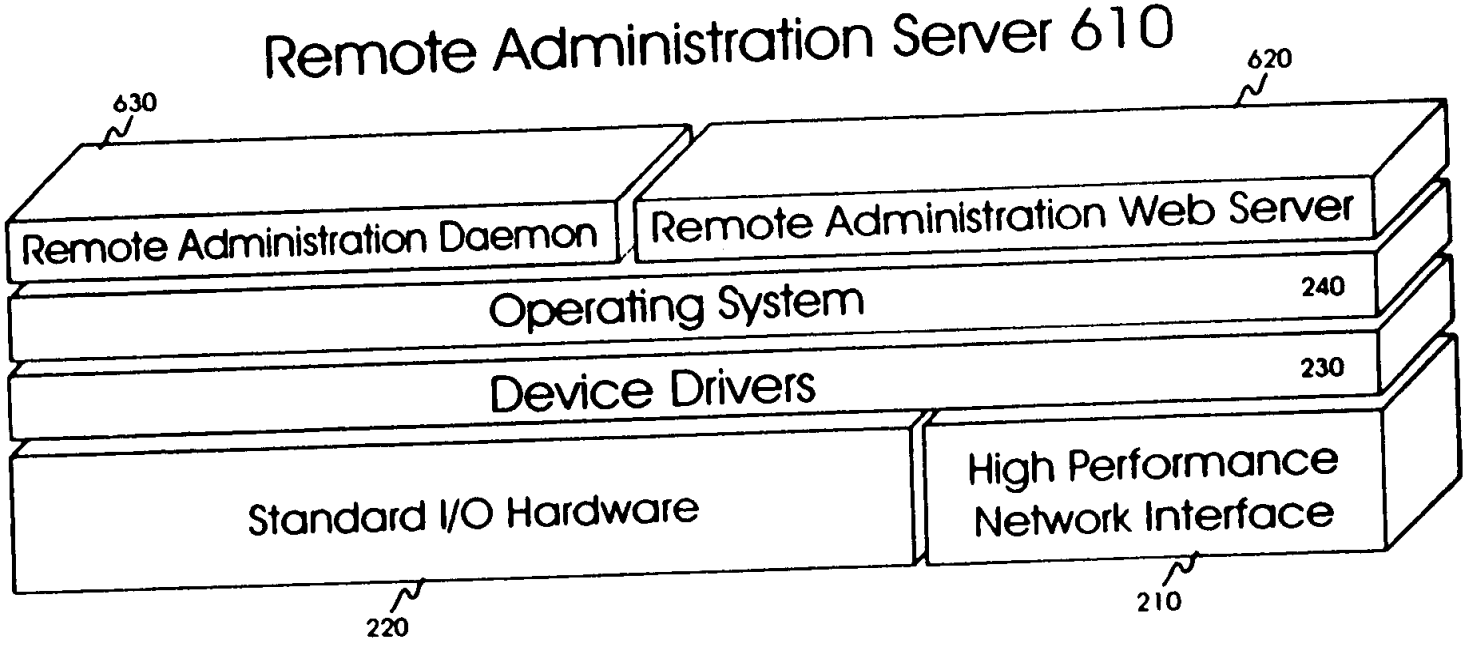

Remote Administration Server 610
620
630
Remote Administration Daemon
Remote Administration Web Server
Operating System
240
Device Drivers
230
Standard I/O Hardware
High Performance
Network Interface
220
210

FIG. 10C

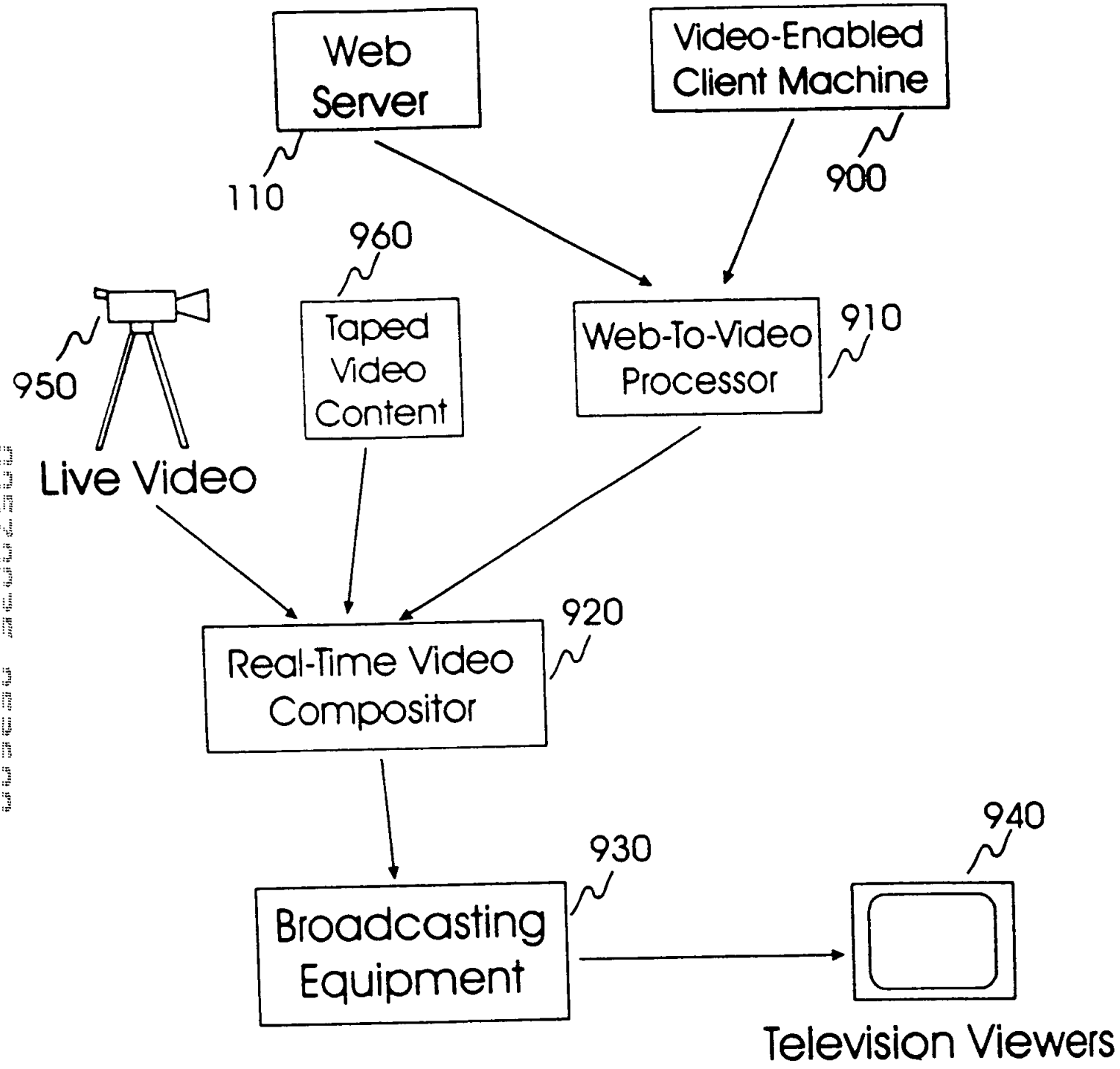

Web Server
110
Video-Enabled Client Machine
900
960
Taped Video Content
Web-To-Video Processor
910
950
Live Video
920
Real-Time Video Compositor
930
Broadcasting Equipment
940
Television Viewers

FIG. 11

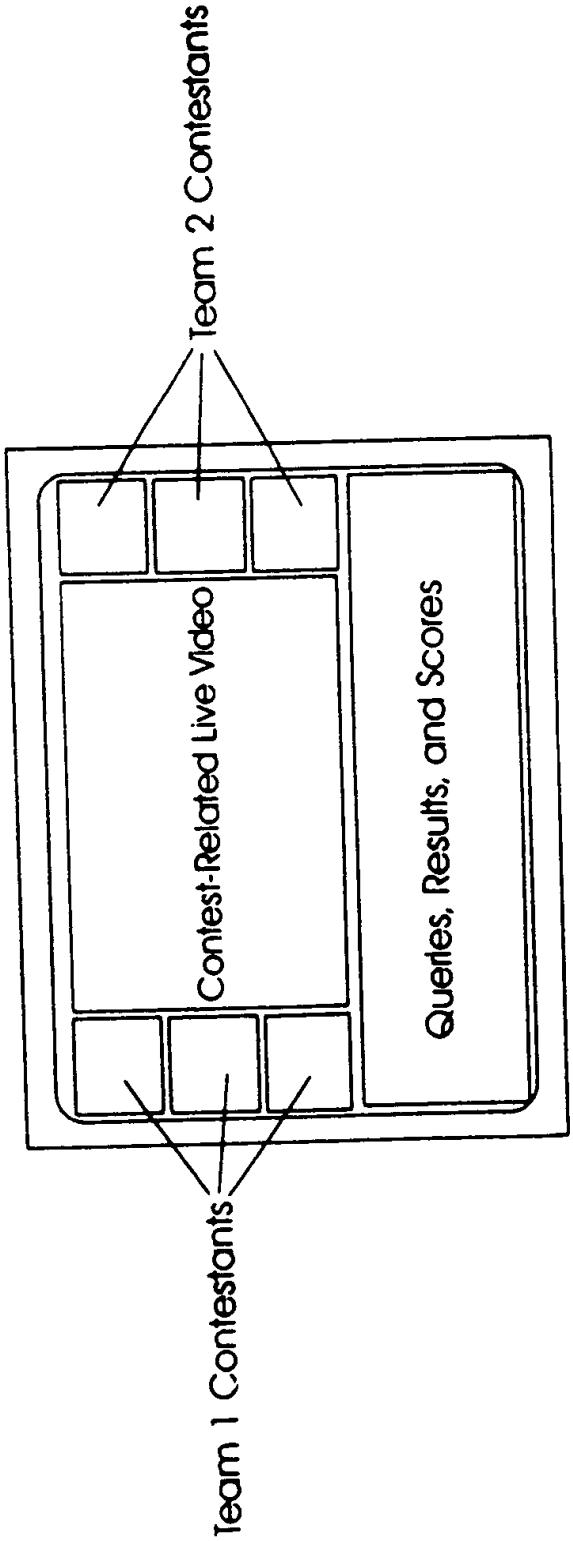

Team 2 Contestants
Contest-Related Live Video
Queries, Results, and Scores
Team 1 Contestants

FIG. 11A

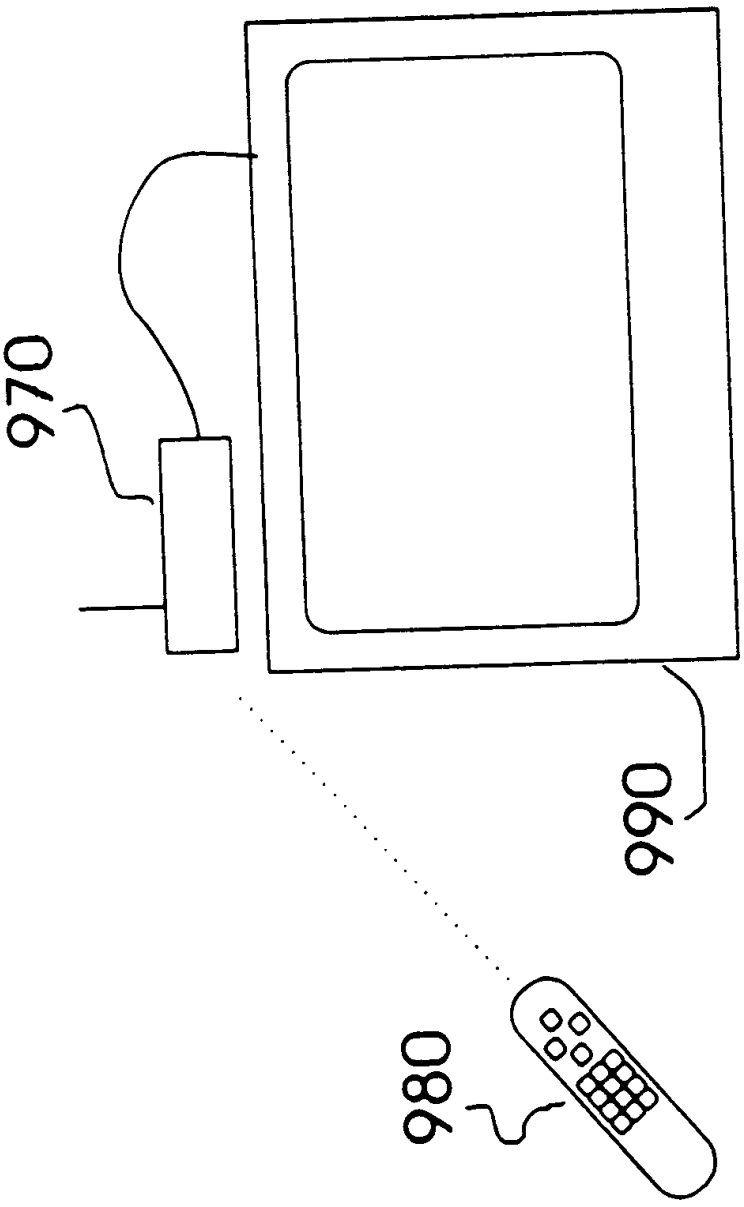
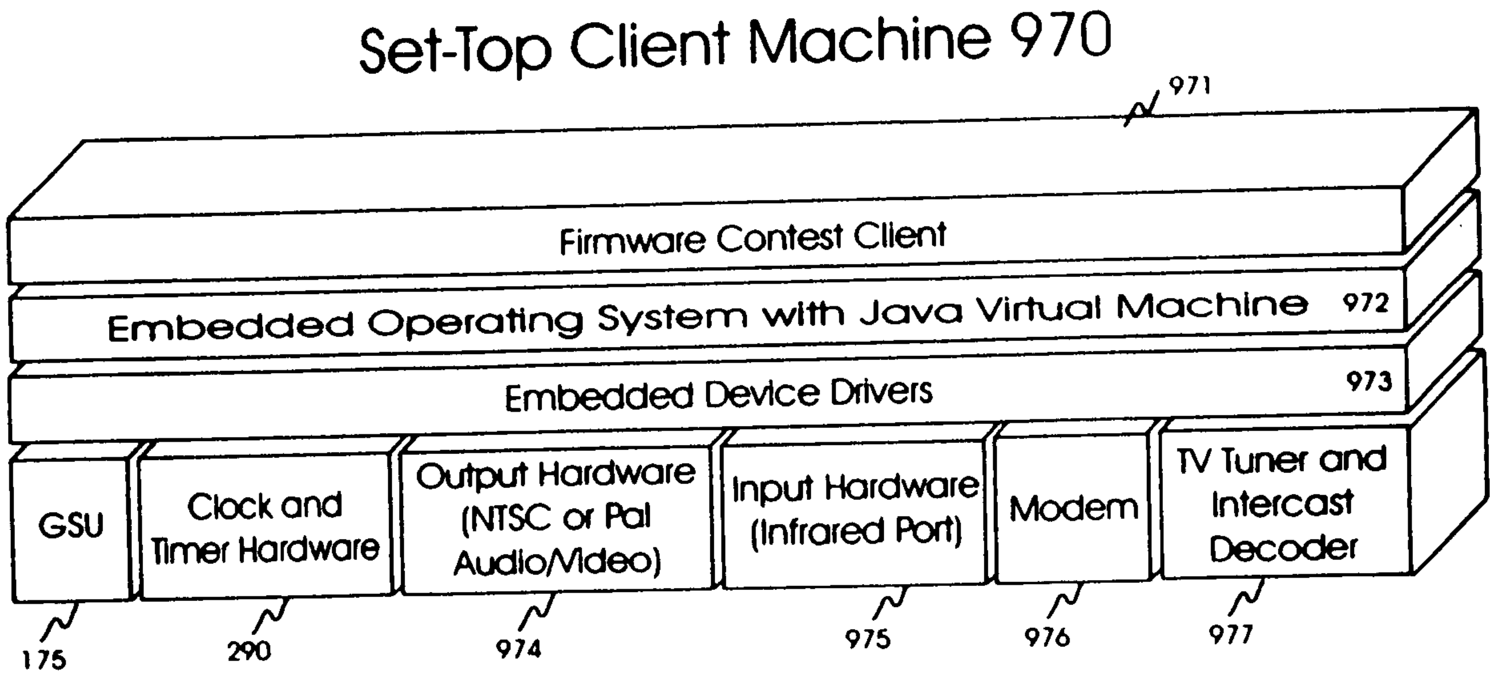


FIG. 12


Set-Top Client Machine 970
971
Firmware Contest Client
Embedded Operating System with Java Virtual Machine
972
Embedded Device Drivers
973
GSU
Clock and Timer Hardware
Output Hardware (NTSC or Pal Audio/Video)
Input Hardware (Infrared Port)
Modem
TV Tuner and Intercast Decoder
175
290
974
975
976
977

F I G. 12A

Examples of GSU Inputs for Time and Space Stamping

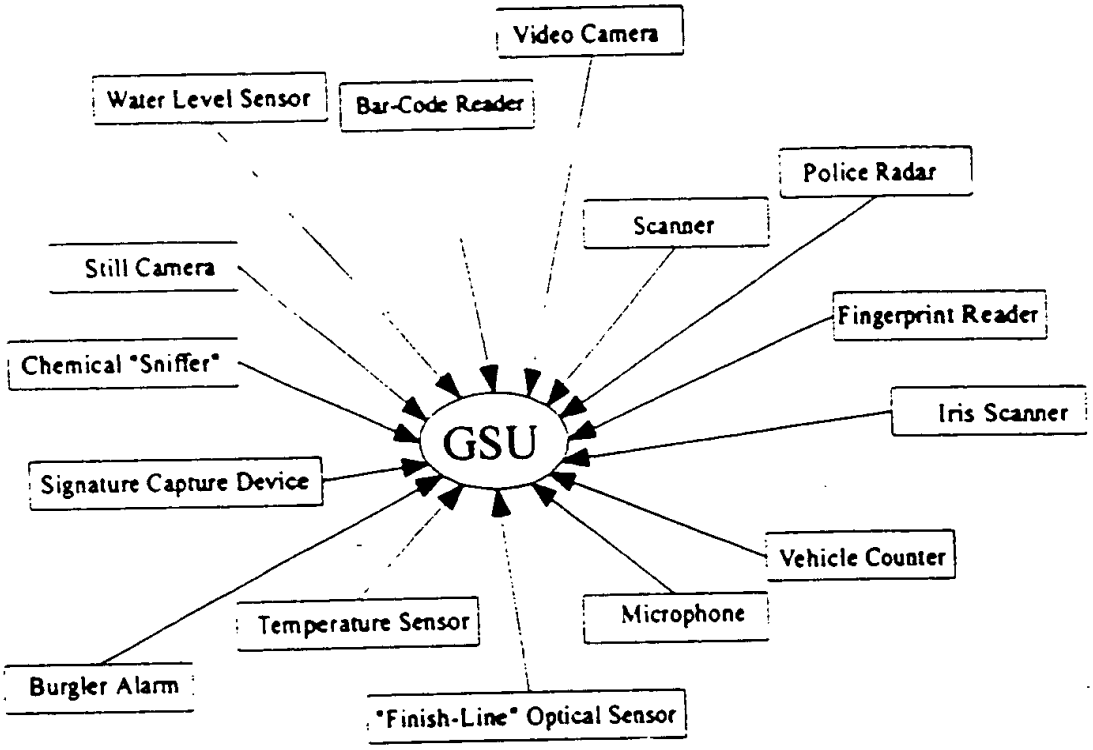
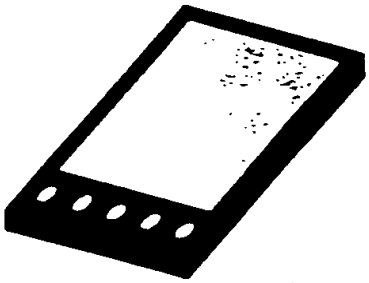
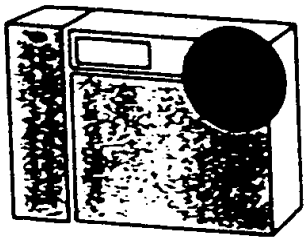


FIG. 13

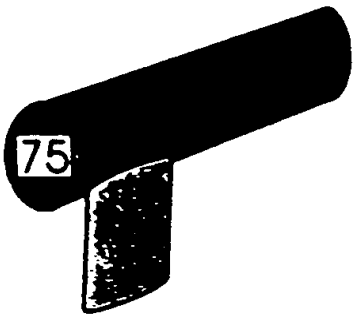
Embedded GSU Applications



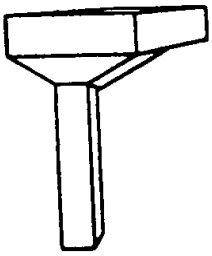
Handheld Computer



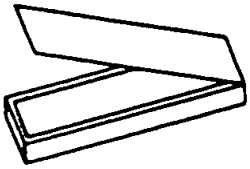
Digital Camera



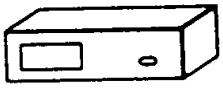
Police Radar



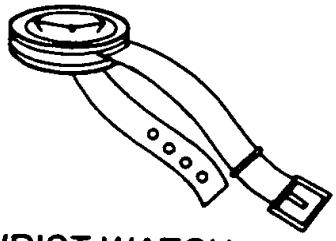
Bar Code Scanner



Scanner



CABLE TV SET-TOP BOXES



WRIST WATCH

FIG. 14

Peripheral GSU Configurations

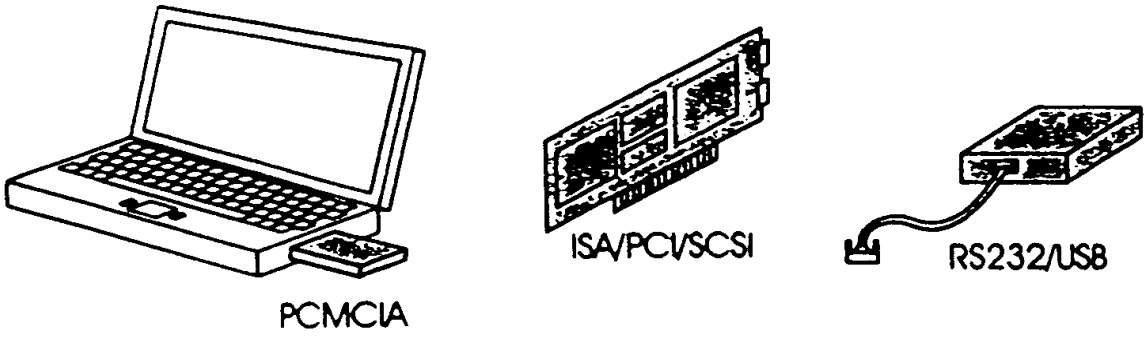


FIG. 15

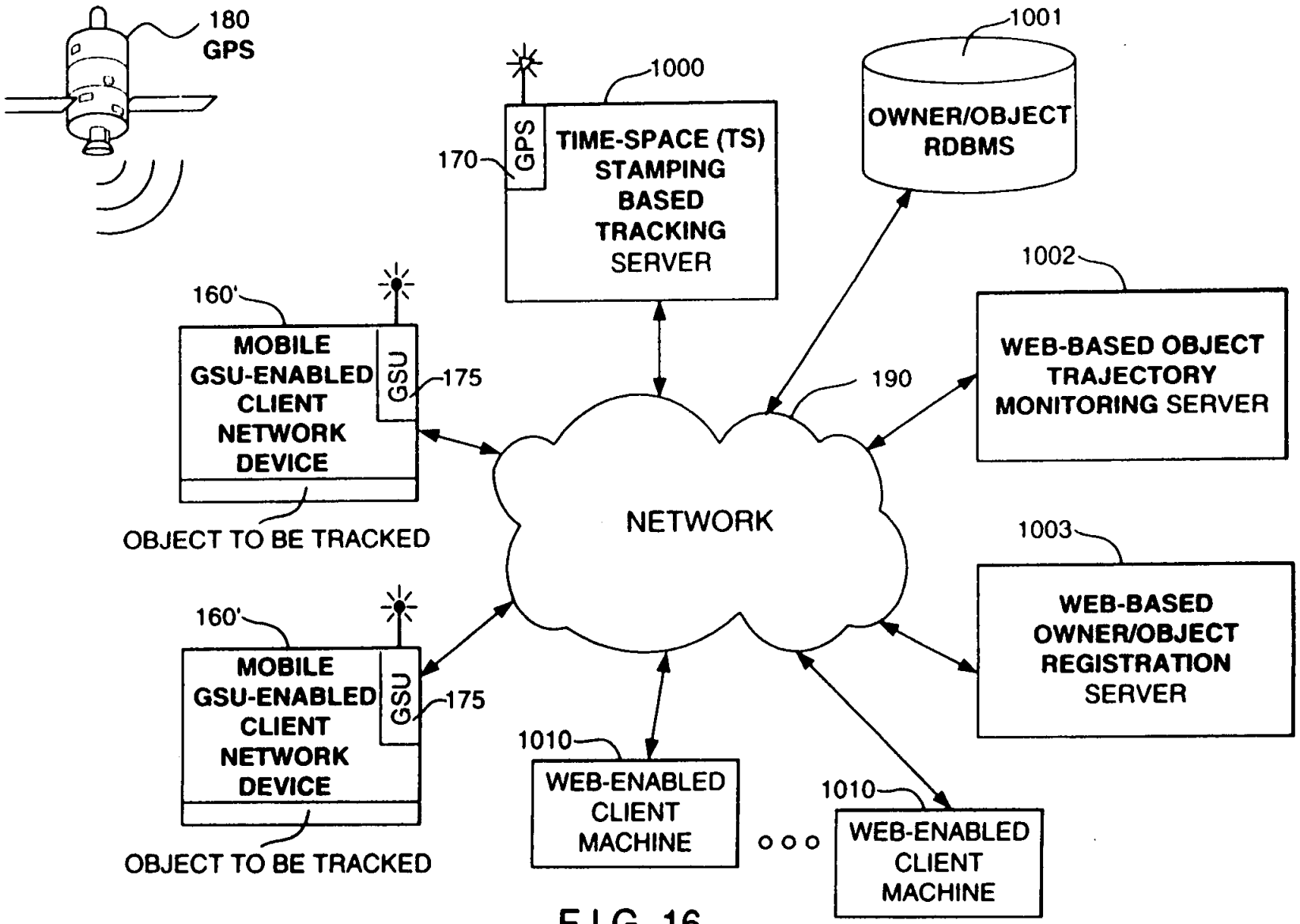
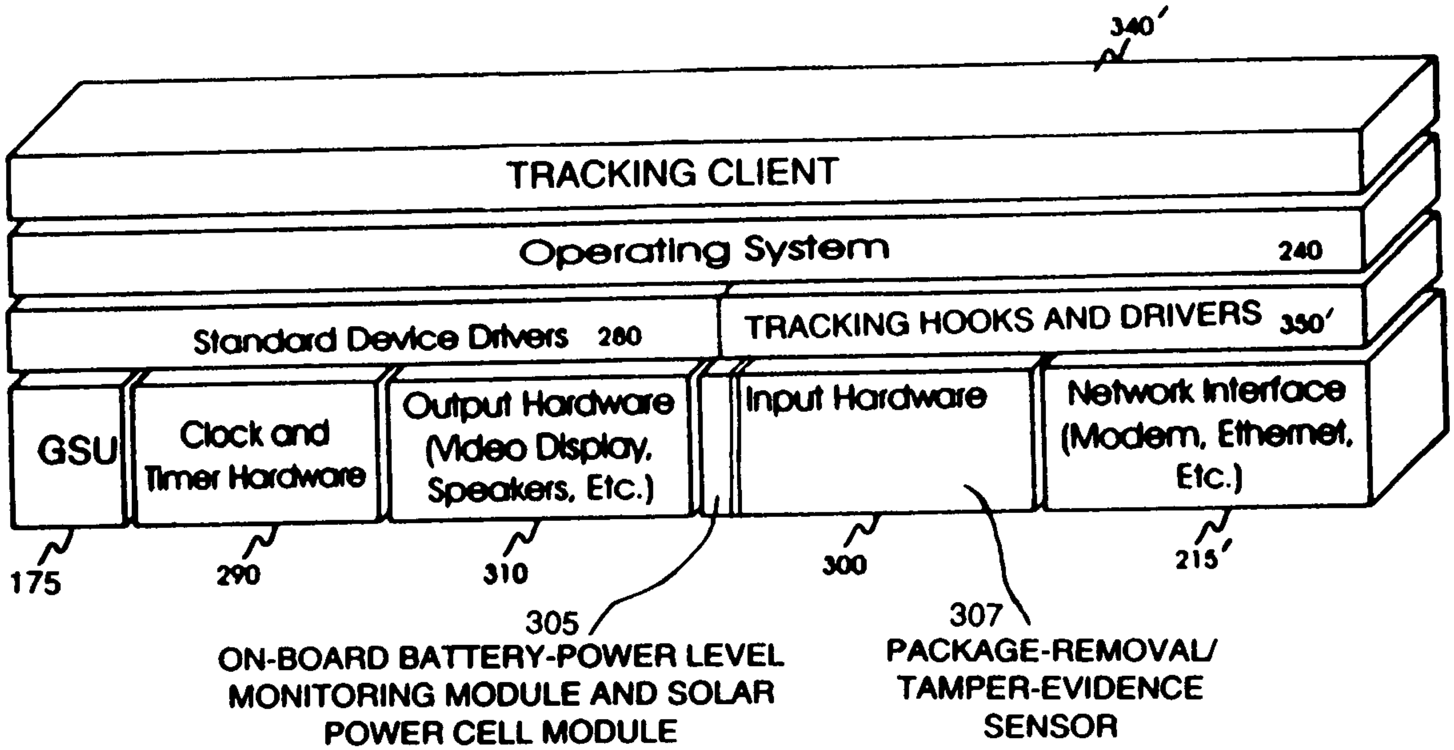

180
GPS
1000
GPS
170
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
1001
OWNER/OBJECT RDBMS
1002
WEB-BASED OBJECT TRAJECTORY MONITORING SERVER
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
OBJECT TO BE TRACKED
190
NETWORK
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
OBJECT TO BE TRACKED
1003
WEB-BASED OWNER/OBJECT REGISTRATION SERVER
1010
WEB-ENABLED CLIENT MACHINE
o o o
1010
WEB-ENABLED CLIENT MACHINE

FIG. 16

GSU-ENABLED CLIENT NETWORK DEVICE 160'



F I G. 16A

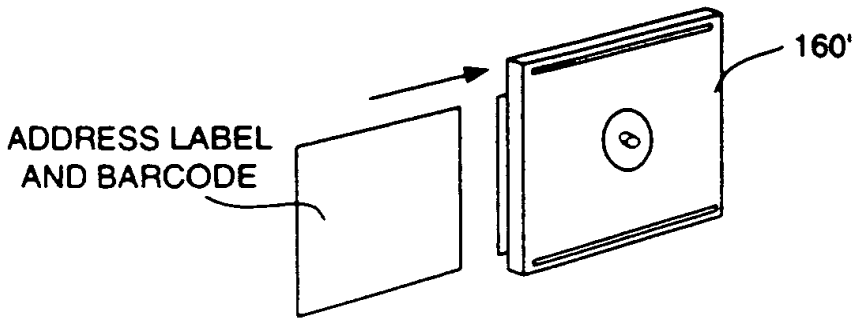


FIG. 16A1

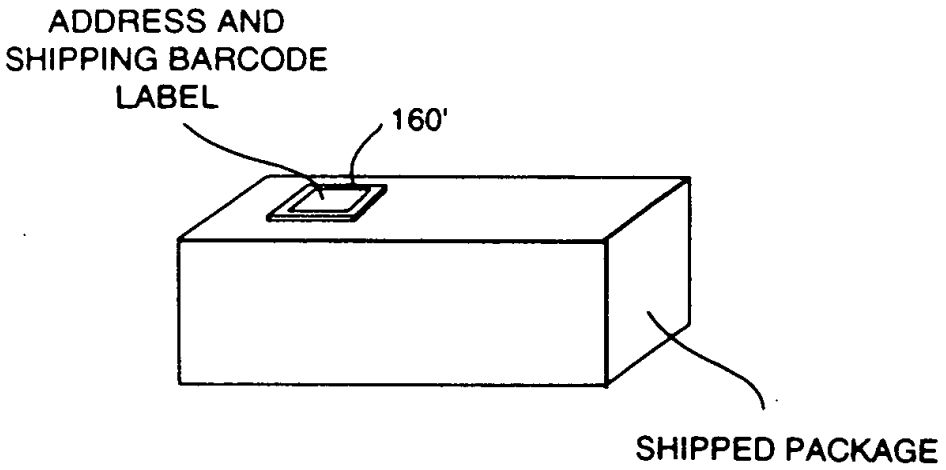


FIG. 16A2

TS-STAMPING BASED TRACKING SERVER 1000

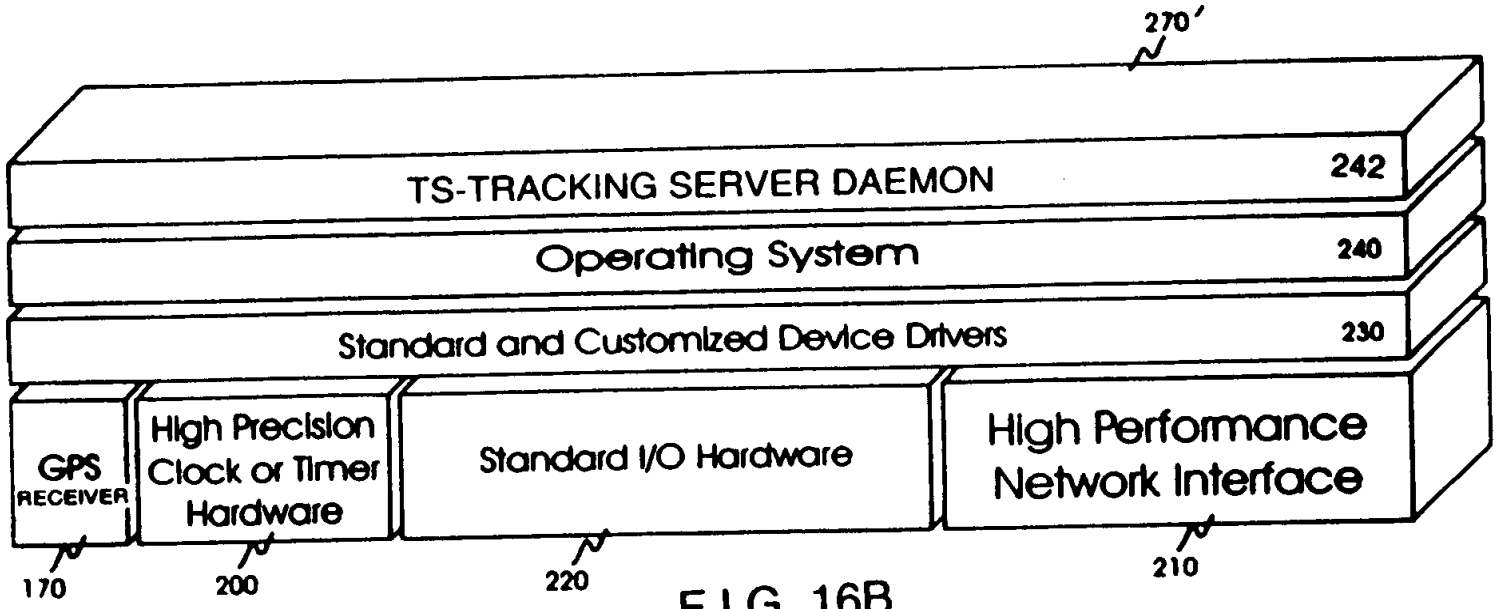


FIG. 16B

WEB-BASED OWNER/OBJECT REGISTRATION SERVER 1003

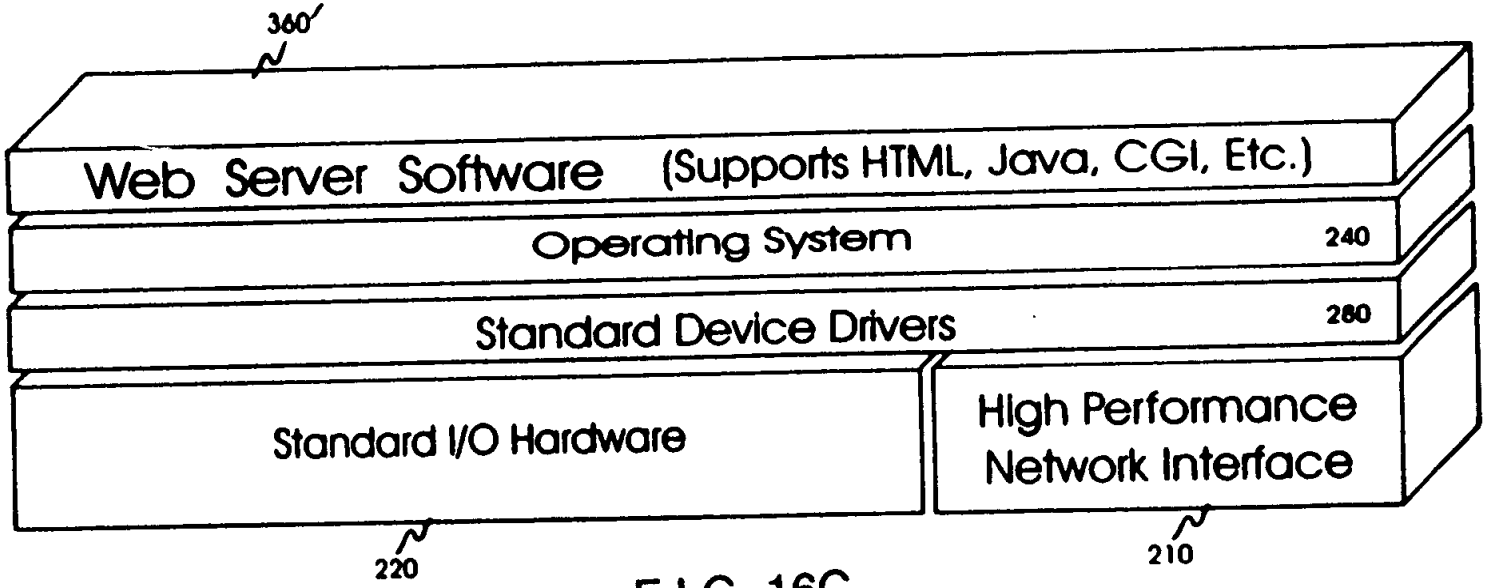


FIG. 16C

WEB-BASED OBJECT TRAJECTORY MONITORING SERVER 1002

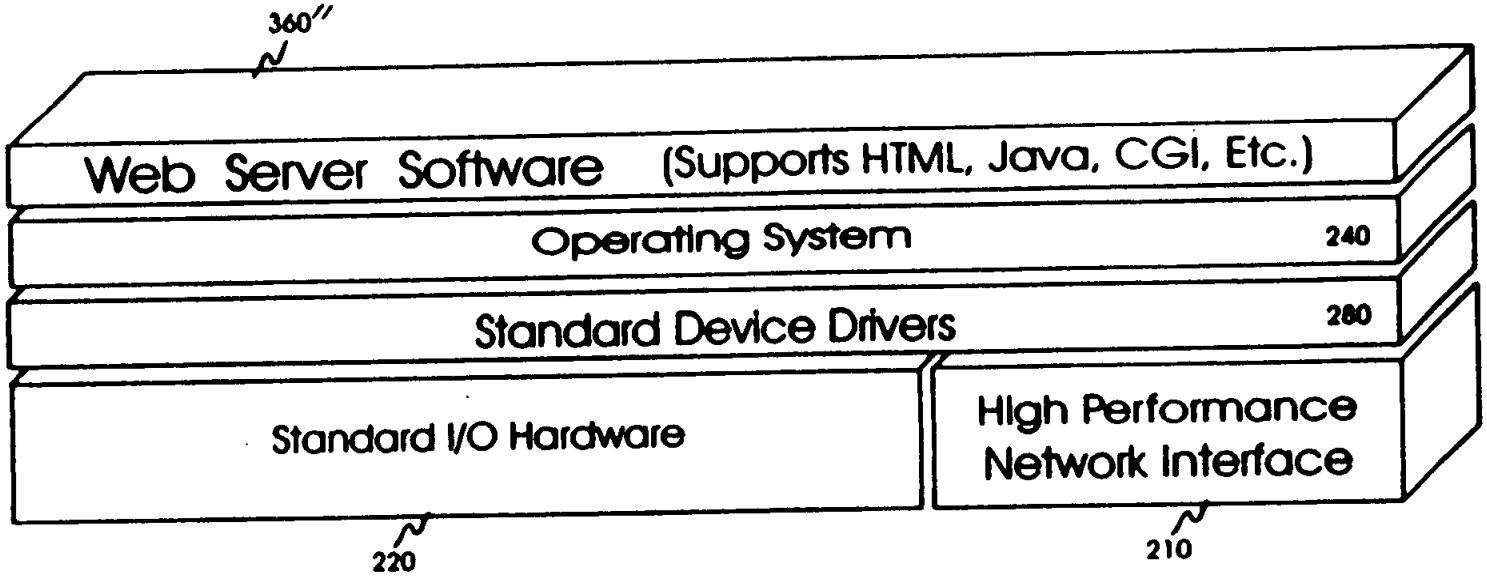


FIG. 16D

TIME-SPACE (T,S) COORDINATE TRACKING OF MOBILE OBJECTS

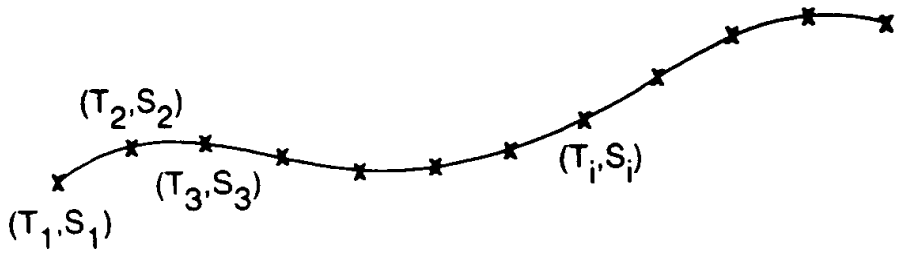


FIG. 17A

TIME-SPACE (T,S) STAMPING OF STATIONARY OBJECTS TO DETECT MOVEMENT THEREOF

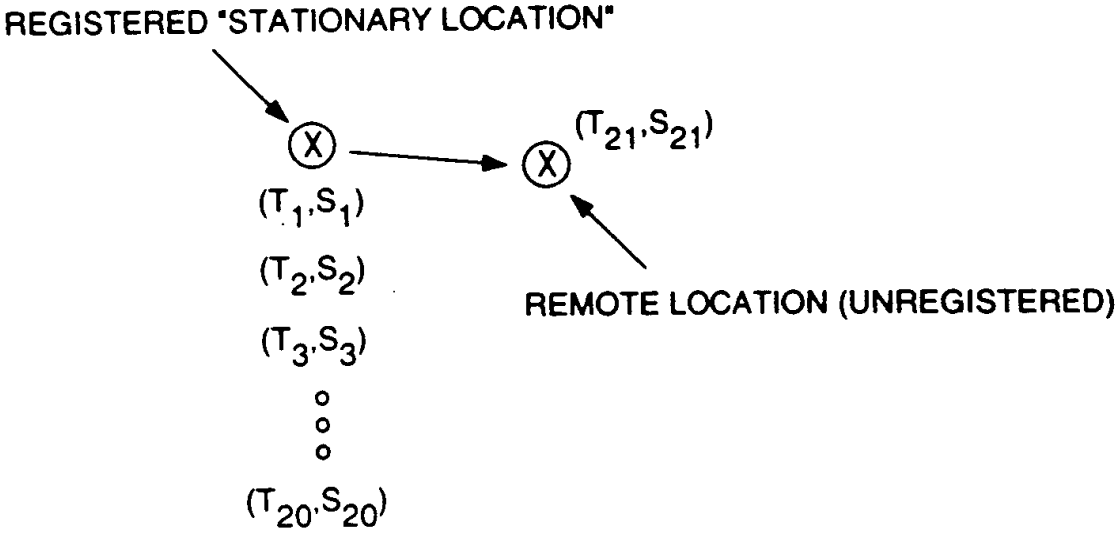
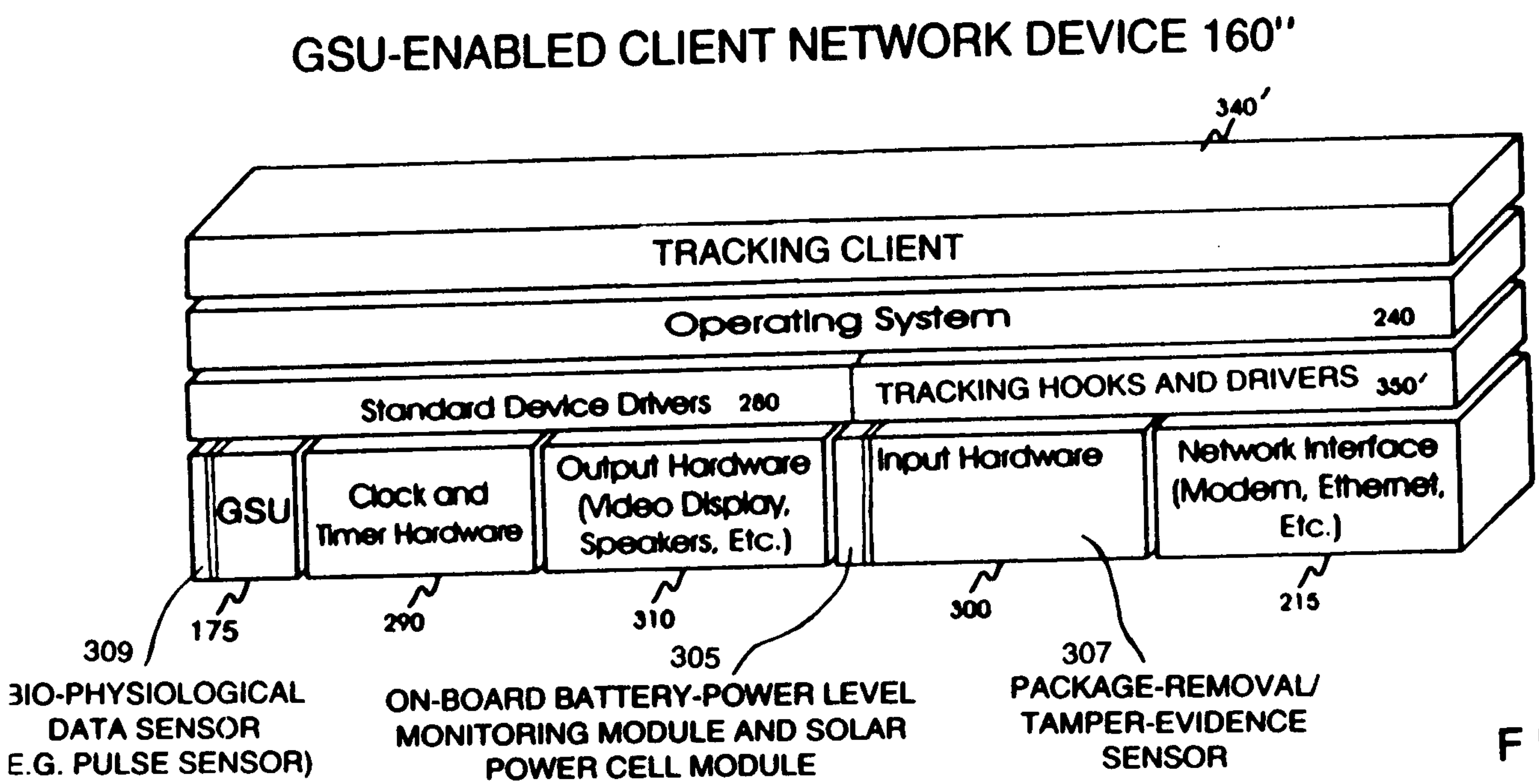


FIG. 17B

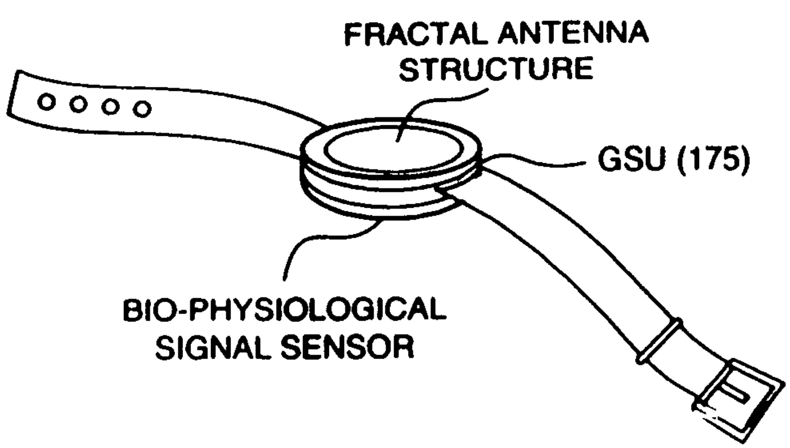
OWNER/OBJECT DATABASE TABLE

OBJECT NAME	OBJECT OWNER	GSU'S UNIQUE ID CODE (UIC)	TIME-SPACE STAMP		TIME-SPACE STAMP
TOM SMITH	TOM SMITH	1567N2B0	(T_1,S_1)		(T_i,S_i)
JERRY DOG	TOM SMITH	1568N2B0	(T_1,S_1)		(T_i,S_i)
VOLVO S80	TOM SMITH	1569N2B0	(T_1,S_1)		(T_i,S_i)
o o o	o o o	o o o	o o o	ooo	o o o

FIG. 18



F I G. 19A



F I G. 19B

TIME-SPACE BIOPHYSIOLOGICAL (TSB)
STAMPING BASED TRACKING SERVER 1007

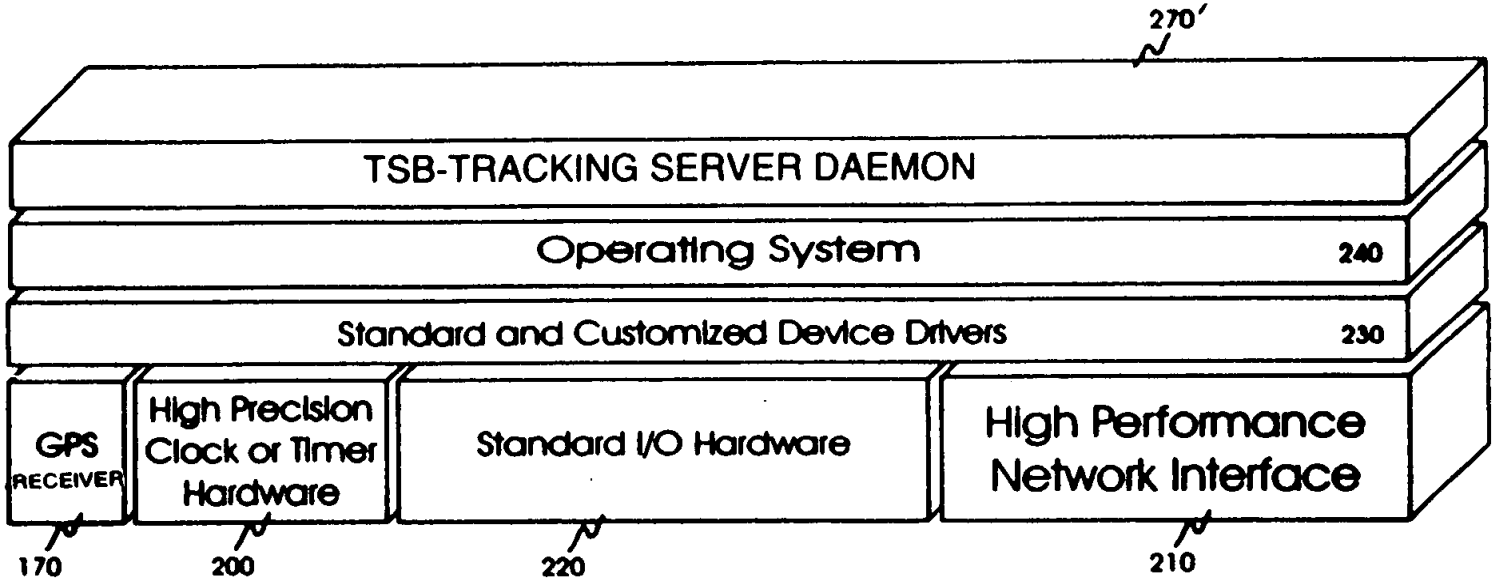


FIG. 20

(T,S,B) COORDINATE TRACKING OF MOBILE OBJECTS

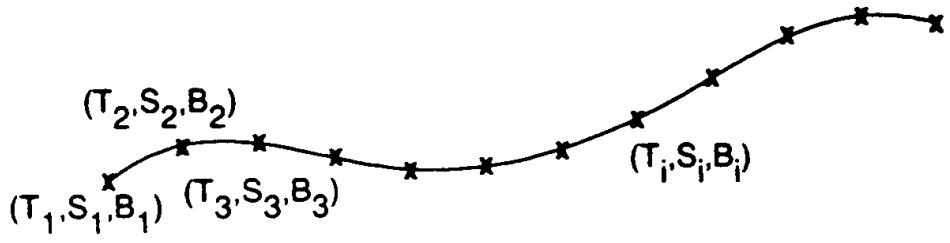


FIG. 21

OWNER/OBJECT DATABASE TABLE

OBJECT NAME	OBJECT OWNER	GSU'S UNIQUE ID CODE (UIC)	TSB STAMP		TSB STAMP
TOM SMITH	TOM SMITH	1567N2B0	(T_1,S_1,B_1)		(T_i,S_i,B_i)
JERRY DOG	TOM SMITH	1568N2B0	(T_1,S_1,B_1)		(T_i,S_i,B_i)
VOLVO S80	TOM SMITH	1569N2B0	(T_1,S_1,B_1)		(T_i,S_i,B_i)
o o o	o o o	o o o	o o o	ooo	o o o

FIG. 22

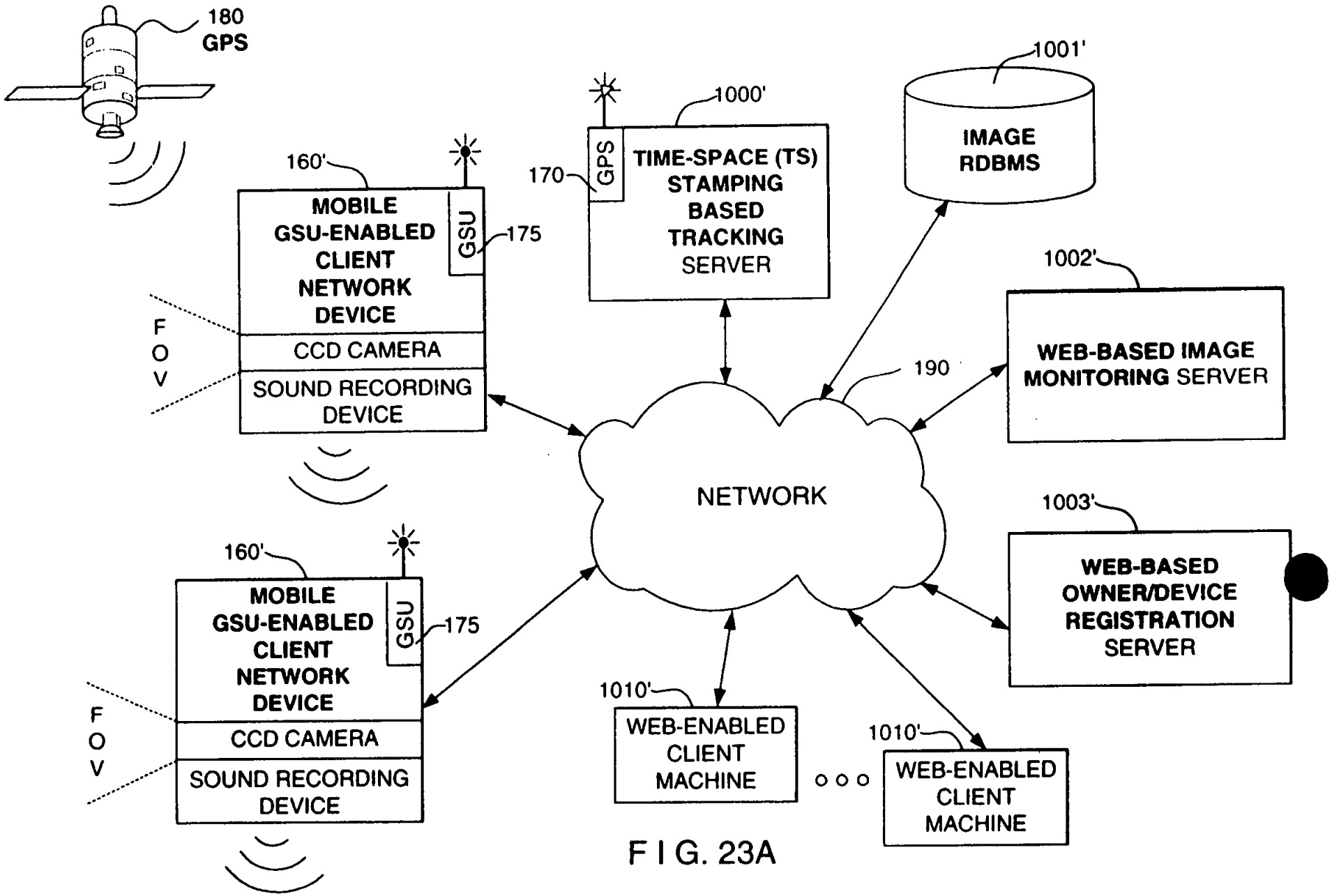

180
GPS
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
CCD CAMERA
SOUND RECORDING DEVICE
F O V
170
GPS
1000'
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
1001'
IMAGE RDBMS
1002'
WEB-BASED IMAGE MONITORING SERVER
190
NETWORK
1003'
WEB-BASED OWNER/DEVICE REGISTRATION SERVER
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
CCD CAMERA
SOUND RECORDING DEVICE
F O V
1010'
WEB-ENABLED CLIENT MACHINE
o o o
1010'
WEB-ENABLED CLIENT MACHINE

FIG. 23A

GSU-ENABLED CLIENT NETWORK DEVICE	TS-STAMPED CAPTURED IMAGE			
	T1	T2	ooo	TN
X125132			ooo	
X123561			ooo	
⋮				
X351275			ooo	

FIG. 23B

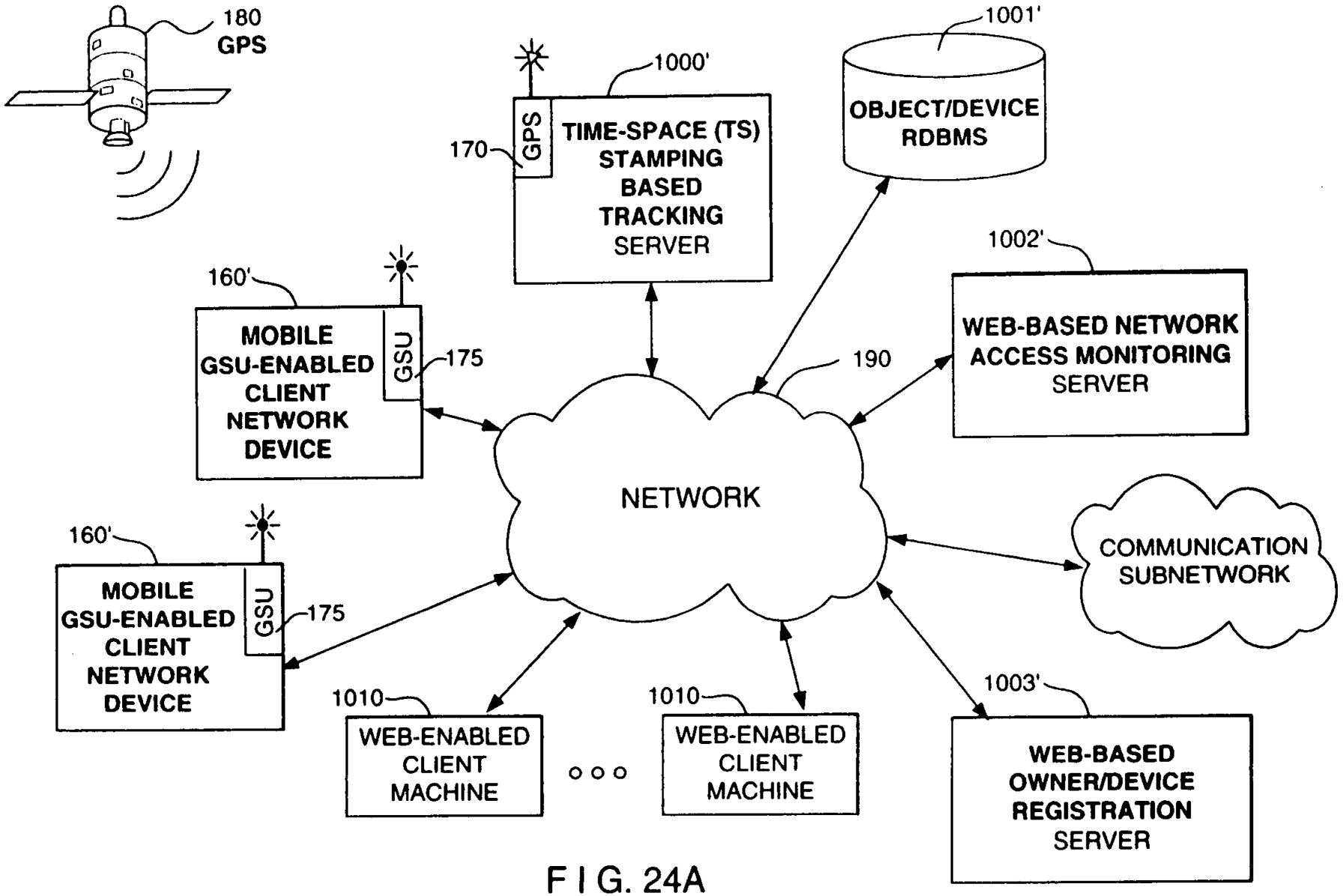

180
GPS
1000'
GPS
170
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
1001'
OBJECT/DEVICE RDBMS
1002'
WEB-BASED NETWORK ACCESS MONITORING SERVER
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
190
NETWORK
COMMUNICATION SUBNETWORK
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
1010
WEB-ENABLED CLIENT MACHINE
o o o
1010
WEB-ENABLED CLIENT MACHINE
1003'
WEB-BASED OWNER/DEVICE REGISTRATION SERVER

FIG. 24A

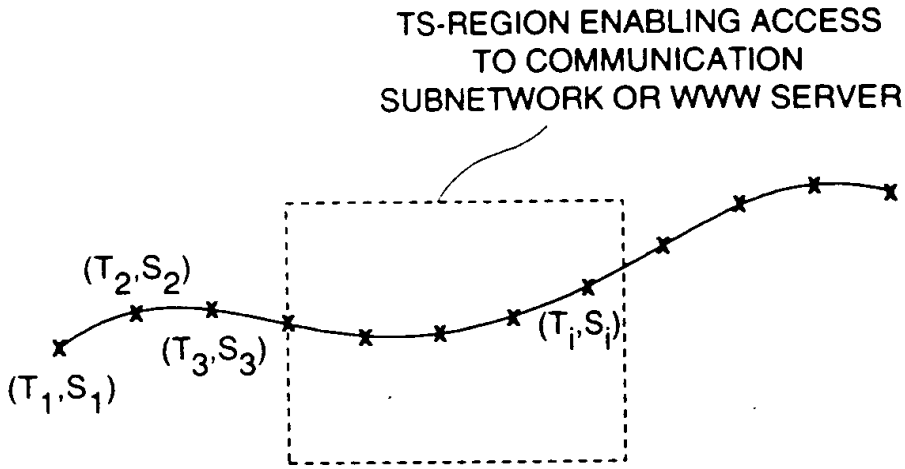

TS-REGION ENABLING ACCESS
TO COMMUNICATION
SUBNETWORK OR WWW SERVER
(T_2,S_2)
(T_3,S_3)
(T_1,S_1)
(T_i,S_i)

FIG. 24B

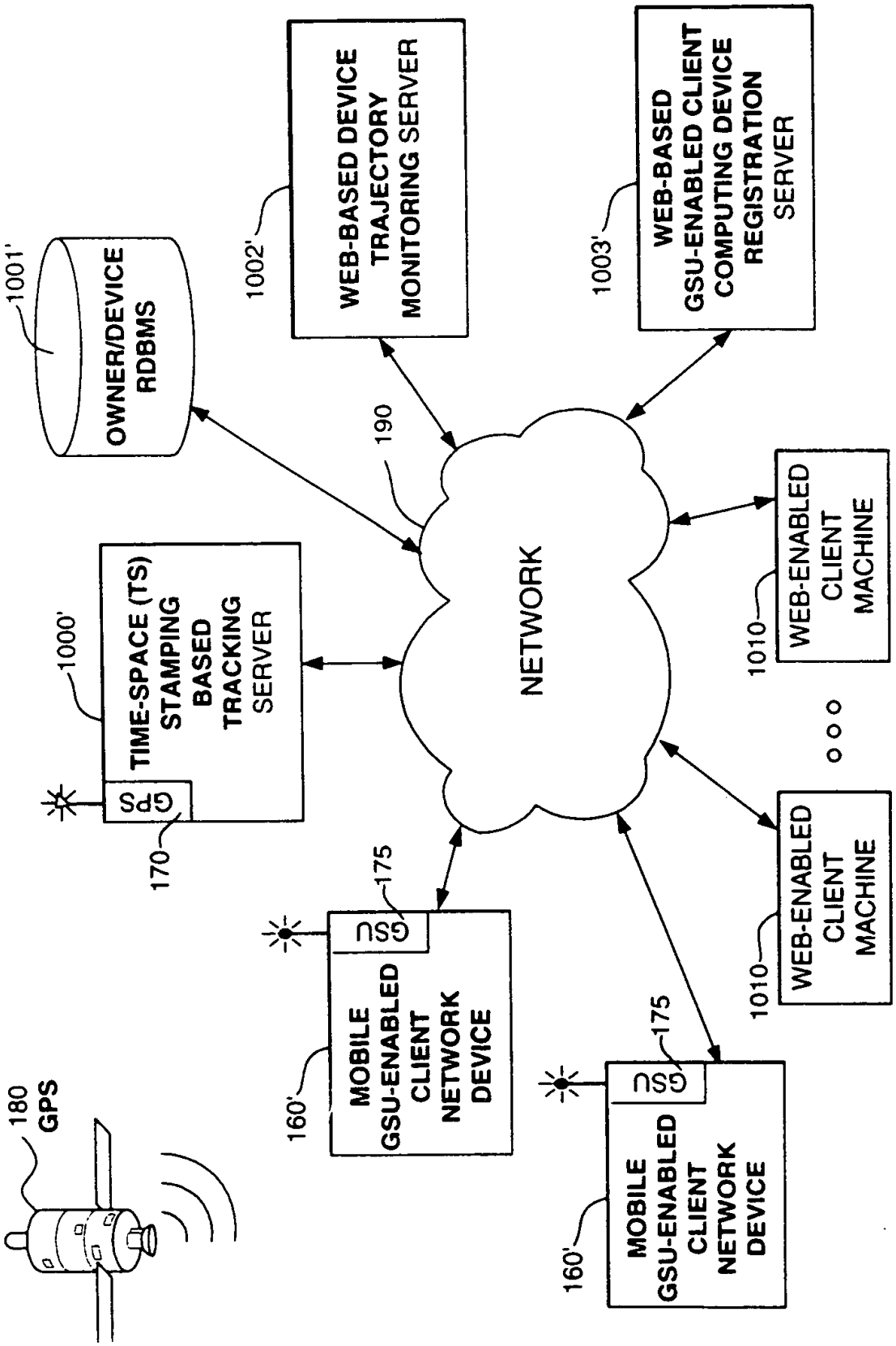

180
GPS
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
170
GPS
1000'
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
1001'
OWNER/DEVICE RDBMS
1002'
WEB-BASED DEVICE TRAJECTORY MONITORING SERVER
1003'
WEB-BASED GSU-ENABLED CLIENT COMPUTING DEVICE REGISTRATION SERVER
190
NETWORK
1010
WEB-ENABLED CLIENT MACHINE

FIG. 25A

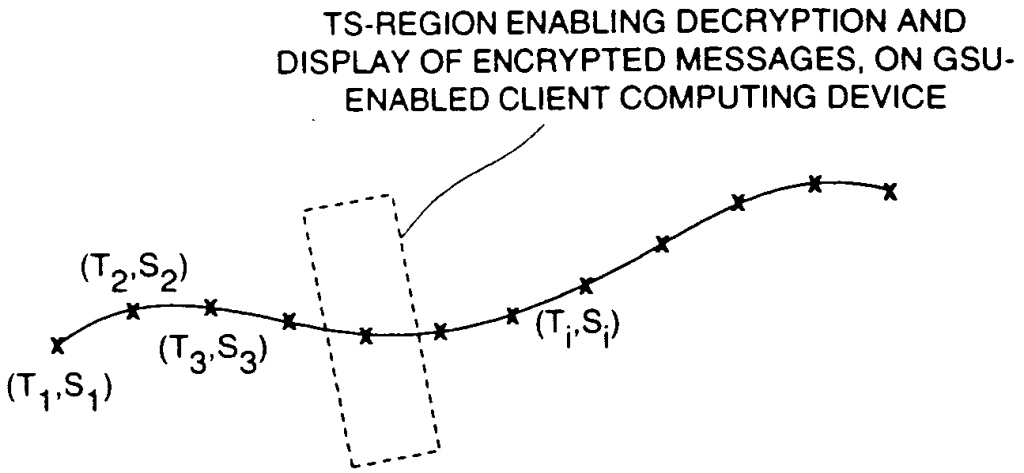

TS-REGION ENABLING DECRYPTION AND DISPLAY OF ENCRYPTED MESSAGES, ON GSU-ENABLED CLIENT COMPUTING DEVICE
(T_2,S_2)
(T_3,S_3)
(T_1,S_1)
(T_i,S_i)

FIG. 25B

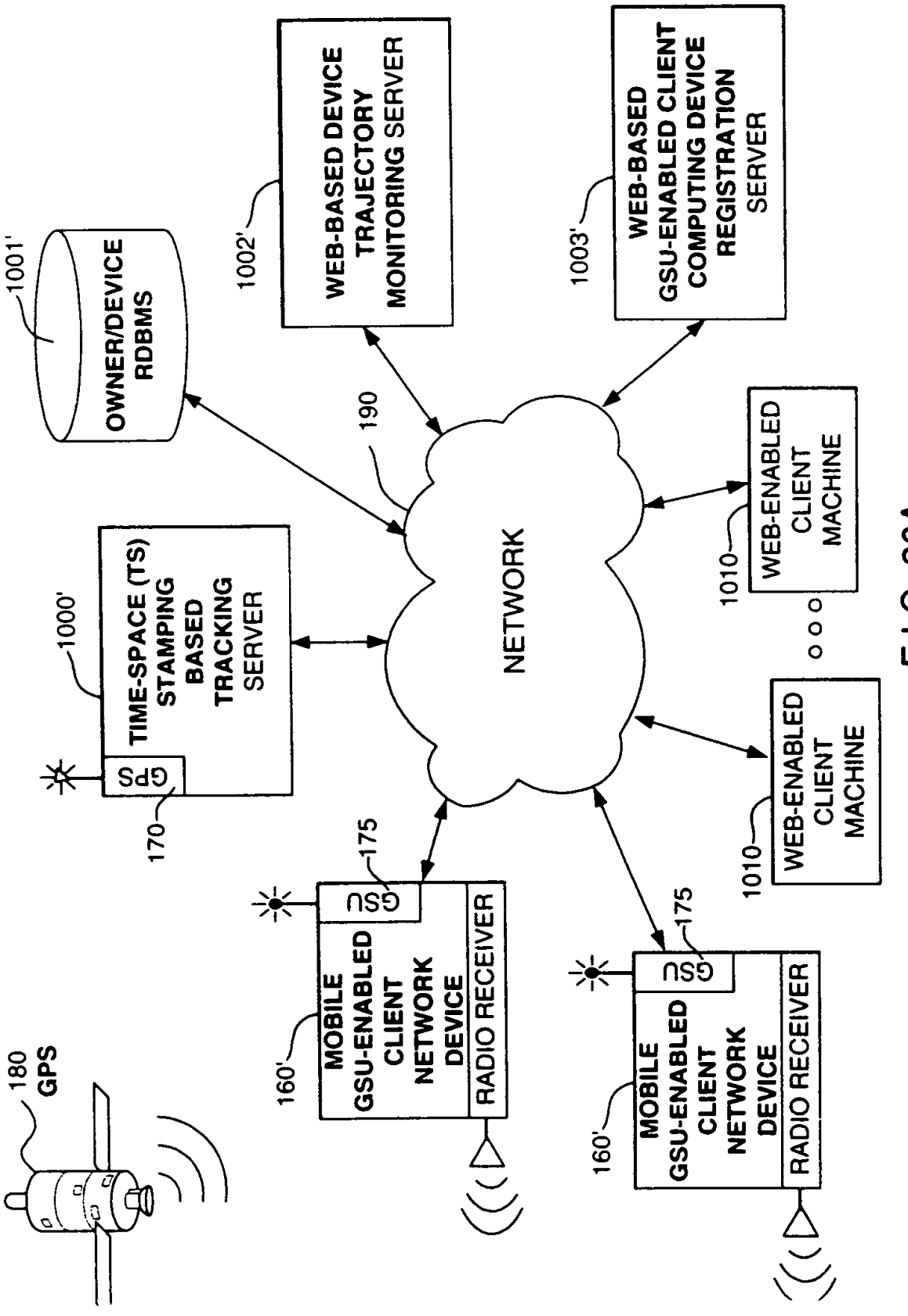

1001'
OWNER/DEVICE RDBMS
1002'
WEB-BASED DEVICE TRAJECTORY MONITORING SERVER
1003'
WEB-BASED GSU-ENABLED CLIENT COMPUTING DEVICE REGISTRATION SERVER
190
NETWORK
1000'
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
GPS
170
1010
WEB-ENABLED CLIENT MACHINE
1010
WEB-ENABLED CLIENT MACHINE
175
GSU
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
RADIO RECEIVER
175
GSU
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
RADIO RECEIVER
180
GPS

FIG. 26A

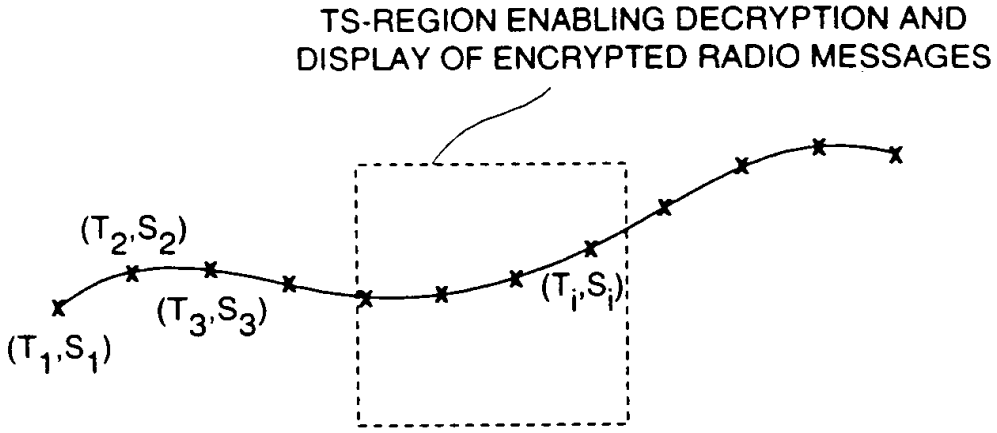

TS-REGION ENABLING DECRYPTION AND
DISPLAY OF ENCRYPTED RADIO MESSAGES
(T_2,S_2)
(T_3,S_3)
(T_1,S_1)
(T_i,S_i)

FIG. 26B

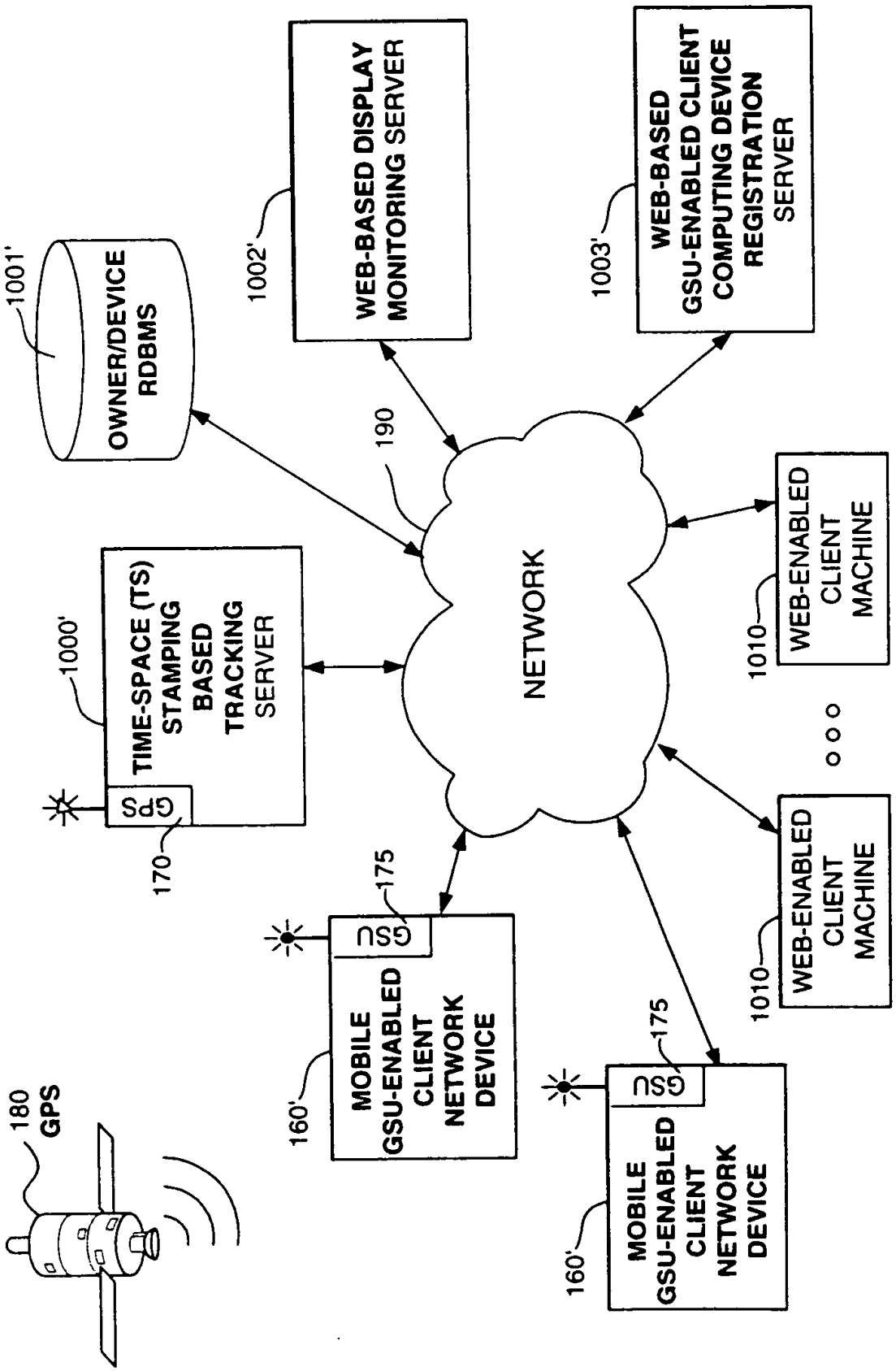

1001'
OWNER/DEVICE RDBMS
1002'
WEB-BASED DISPLAY MONITORING SERVER
1003'
WEB-BASED GSU-ENABLED CLIENT COMPUTING DEVICE REGISTRATION SERVER
190
NETWORK
1000'
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
GPS
170
175
GSU
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
1010
WEB-ENABLED CLIENT MACHINE
180
GPS

FIG. 27A

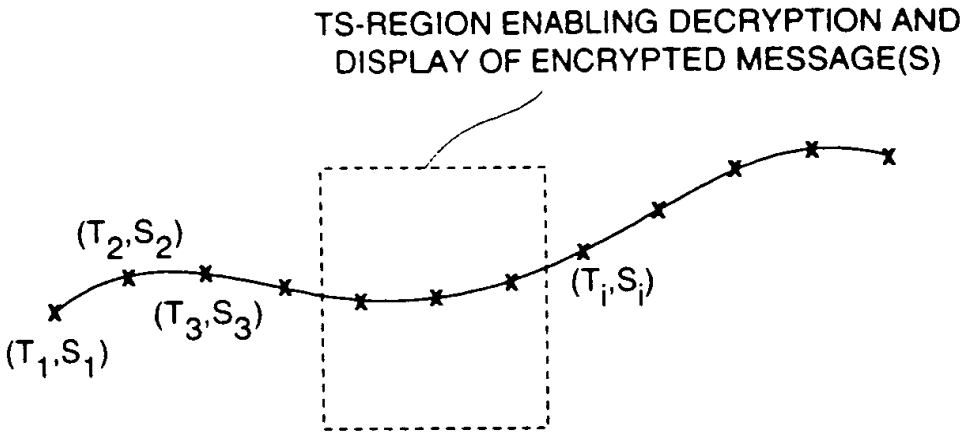

TS-REGION ENABLING DECRYPTION AND
DISPLAY OF ENCRYPTED MESSAGE(S)
(T_2,S_2)
(T_3,S_3)
(T_1,S_1)
(T_i,S_i)

FIG. 27B

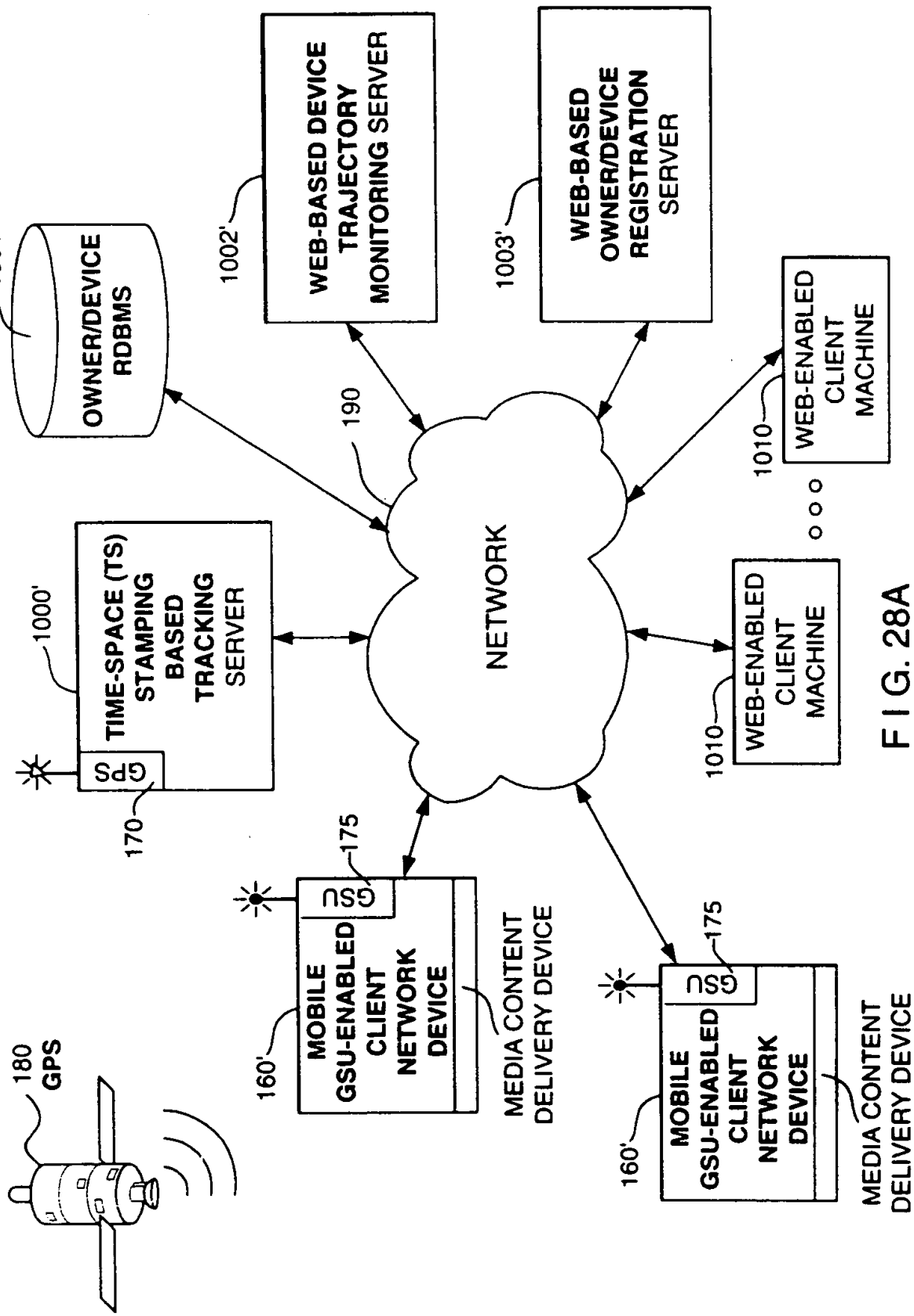

1001'
OWNER/DEVICE RDBMS
1002'
WEB-BASED DEVICE TRAJECTORY MONITORING SERVER
1003'
WEB-BASED OWNER/DEVICE REGISTRATION SERVER
190
NETWORK
1000'
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
GPS
170
175
GSU
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
MEDIA CONTENT DELIVERY DEVICE
1010
WEB-ENABLED CLIENT MACHINE
180
GPS

FIG. 28A

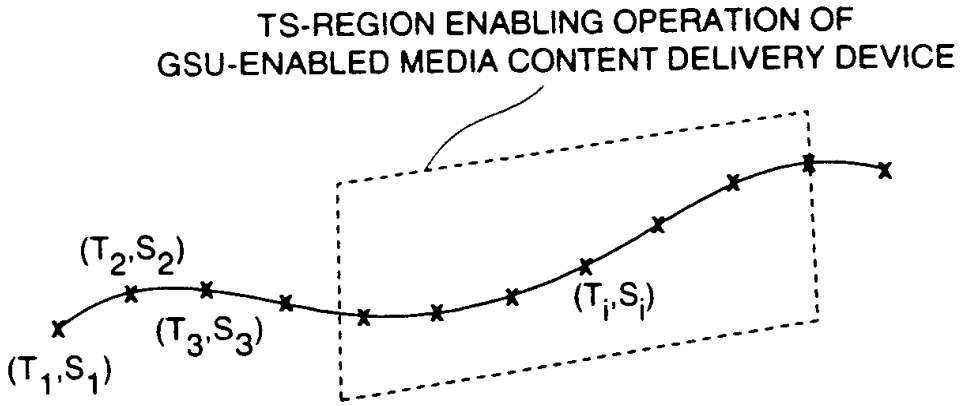

TS-REGION ENABLING OPERATION OF
GSU-ENABLED MEDIA CONTENT DELIVERY DEVICE
(T_2,S_2)
(T_3,S_3)
(T_1,S_1)
(T_i,S_i)

FIG. 28B

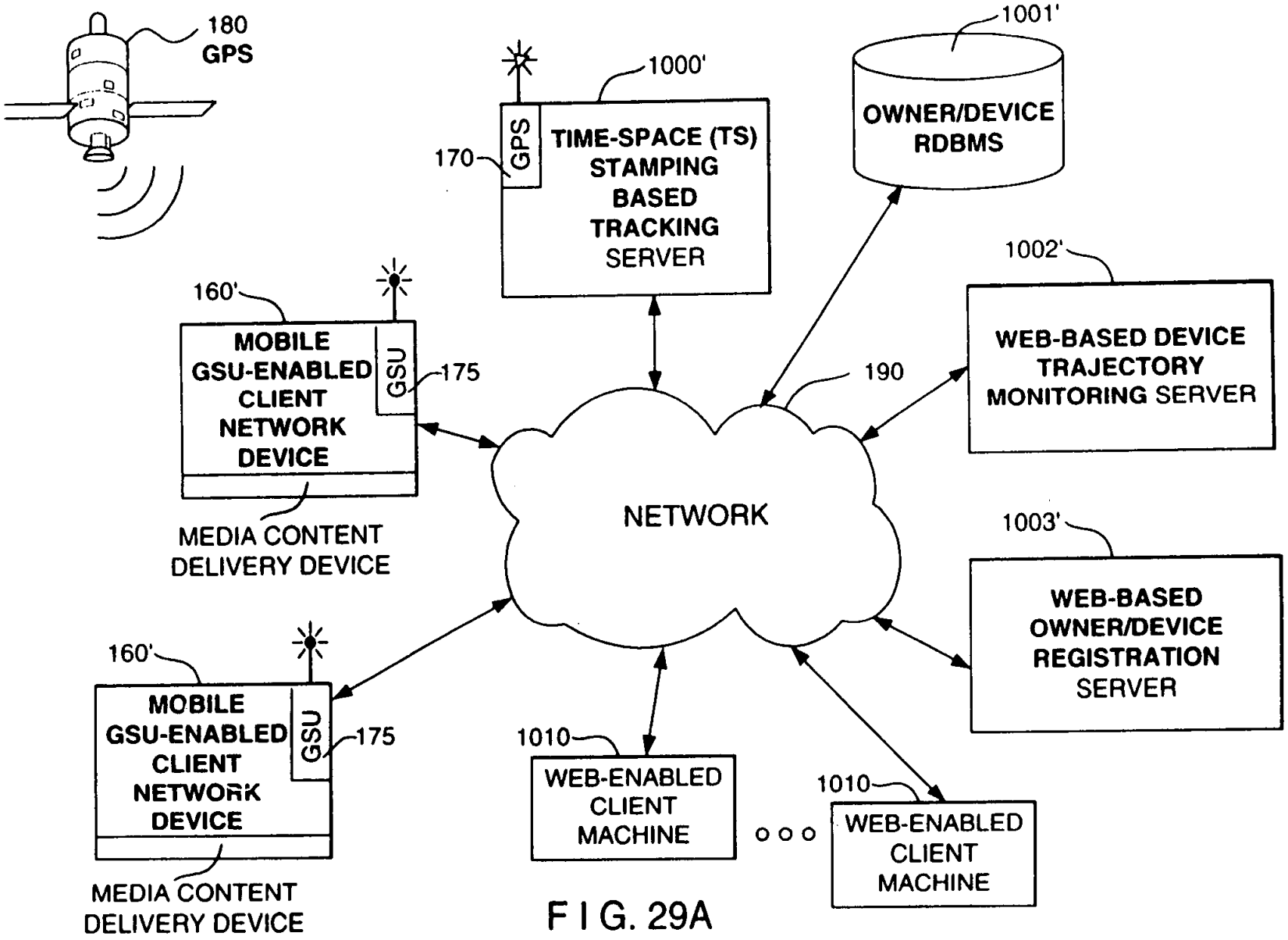

180
GPS
1000'
GPS
170
TIME-SPACE (TS) STAMPING BASED TRACKING SERVER
1001'
OWNER/DEVICE RDBMS
1002'
WEB-BASED DEVICE TRAJECTORY MONITORING SERVER
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
MEDIA CONTENT DELIVERY DEVICE
190
NETWORK
1003'
WEB-BASED OWNER/DEVICE REGISTRATION SERVER
160'
MOBILE GSU-ENABLED CLIENT NETWORK DEVICE
GSU
175
MEDIA CONTENT DELIVERY DEVICE
1010
WEB-ENABLED CLIENT MACHINE
o o o
1010
WEB-ENABLED CLIENT MACHINE

FIG. 29A

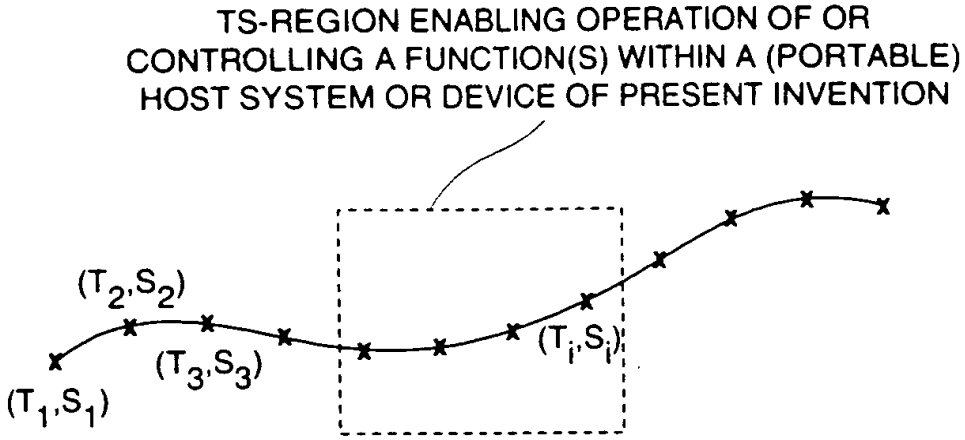

TS-REGION ENABLING OPERATION OF OR
CONTROLLING A FUNCTION(S) WITHIN A (PORTABLE)
HOST SYSTEM OR DEVICE OF PRESENT INVENTION
(T_2,S_2)
(T_3,S_3)
(T_1,S_1)
(T_i,S_i)

FIG. 29B